SMX-K40BN/SMX-K40SN/SMX-K40LN
SMX-K44BN/SMX-K44SN/SMX-K44LN
SMX-K45BN/SMX-K45SN/SMX-K45LN
SMX-K400BN/SMX-K400SN/SMX-K400LN

Memory Camcorder
user manual

imagine the possibilities

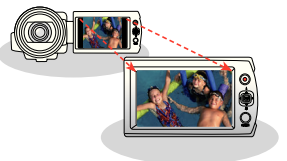
Thank you for purchasing this Samsung product.
To receive more complete service, please
register your product at

www.samsung.com/register

SAMSUNG

key features of your memory camcorder

High-resolution color widescreen LCD (2.7” WIDE TFT LCD)
This Samsung memory camcorder utilizes a 2.7-inch 230k pixel Widescreen LCD which allows bright and clear monitoring. In addition, the LCD Enhancer adjusts color and brightness to the screen lighting conditions for better monitoring under strong sunlight.

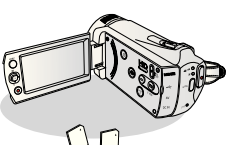


H.264/AVC (MPEG4 part 10/Advanced Video Coding) encoding
Latest video compression technology, H.264, uses a high compression rate to sharply increase the recordable time with the same size storage.

Simple & easy user interface
Designed to provide optimized and easy use with an ergonomic design.
An improved Graphics User Interface offers a new and fresh look as well as an easy operation.

SSD (Solid State Drive) adopted as built-in memory (16GB (SMX-K44 only), 32GB (SMX-K45 only))
SSD based on flash memory has been adopted as built-in memory for the camcorder. SSD helps the camcorder boot, read data and operate the software much faster than normal HDD (Hard Disk Drives). Also, SSD is very stable, durable and makes less noise while in operation. It is environment-friendly because low electric power is required.

User-friendly functions
User-friendly EASY Q optimises your memory camcorder to the recording conditions automatically, providing beginners with the best performance.



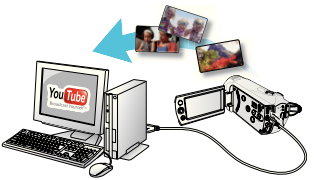
Twice the memory options (16GB (SMX-K44 only), 32GB (SMX-K45 only))
The memory camcorder’s external memory slot accepts high capacity SDHC cards. Play and transfer videos quickly and easily using the memory type of your choice. In addition to this slot, the memory camcorder has built-in memory.

High-resolution image through Mobile DNIe
The Samsung memory camcorder has 3DNR (3-dimensional noise reduction), high-sensitivity color expression (intelligent color expression), High performance Anti-Shake (OIS:Optical Image Stabilizer), and automatic face detection features.

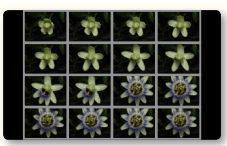
Capture visions farther than the eye can see : 52x Optical Power Zoom, 65x Intelli-Zoom, and 2200x Digital Zoom
Samsung's powerful optical zoom lenses bring the world closer without losing image quality. In addition, Digital Zoom Interpolation enables clearer digital zooming, with less distortion than previous types of digital zooms.

Capture photo images
Captures a moving subject instantly and saves the scene as a photo image.

Time lapse recording catches the moment
You can record a long scene in short intervals. Record artistic, documentary videos including the passage of clouds, blooming flowers etc. Use this function to make UCC (User Created Contents) videos, educational programs or for other purposes.



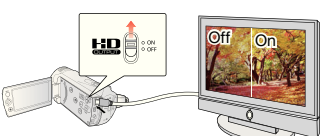
Direct upload of your videos to the web!
The built-in editing Intelli-studio software installs directly from this camcorder to your PC, enabling convenient connection with a USB cable. Intelli-studio also allows direct uploading of your contents to YouTube or Flickr. Sharing the contents with your friends is simpler than ever before.



Make a digest of your video! Storyboard printing!
This function captures 16 still images arbitrarily from the selected video and saves them into the storage media. It presents a quick overview of your video, helping you to understand the overall topic.

Preview Storyboard printing with the ¡VIEW button!
This function provides a preview of the 16 image storyboard to be printed.

SD to HD-quality upscaling function!
You can enjoy viewing your video recorded in SD in HD quality by setting the **HD OUTPUT** switch on the side of your camcorder to **"ON"**. This function is used when upconverting SD recordings to HD for playback on a HDTV.



Various methods for playback as you want with Multi View Option!
The Multi View Option enables you to sort thumbnails of recorded videos and photos in the order of recording, recorded date, and the iSCENE mode for playback.

safety warnings

What the icons and signs in this user manual mean :

WARNING	Death or risk of serious personal injury.
CAUTION	Potential risk of personal injury or material damage.
CAUTION	To reduce the risk of fire, explosion, electric shock, or personal injury when using your camcorder, follow these basic safety precautions:
	Hints or referential pages that may be helpful when operating the camcorder.

These warning signs are here to prevent injury to you and others.
Please follow them explicitly. After reading this section, keep it in a safe place for future reference.

precautions

Warning!

- This camcorder should always be connected to an AC outlet with a protective grounding connection.
- Batteries should not be exposed to excessive heat such as sunshine, fire or similar.

Caution

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

If this power supply is used at 240V ac, a suitable plug adaptor should be used.

BEFORE USING THIS CAMCORDER

- **This camcorder is designed exclusively for use with the high-capacity built-in memory (16GB (SMX-K44 only), (32GB (SMX-K45 only)) and an external memory card.**
- **This camcorder records video in H.264/AVC (MPEG4 part 10/Advanced Video Coding) format compliant with the Standard resolution (SD-VIDEO) format.**
- **Please note that this camcorder is not compatible with other digital video formats.**
- **Before recording important video, make a trial recording.**
  - Play back your trial recording to make sure the video and audio have been recorded properly.
- **The recorded contents cannot be compensated for:**
  - Samsung cannot compensate for any damages caused when recording is not made normally or recorded contents cannot be played back because of a defect in the camcorder or memory card. Also, Samsung cannot be held responsible for your recorded video and audio.
  - Recorded contents may be lost due to an error when handling this camcorder or a memory card, etc. Samsung shall not be held responsible for the loss of recorded contents, and cannot compensate for any damages.
- **Make a backup of important recorded data.**
  - Protect your important recorded data by copying the files to a PC. We recommend copying the data to your PC or other recording media for storage. Refer to the software installation and USB connection guide.
- **Copyright: Please note that this camcorder is intended for consumer use only.**
  - Data recorded on a card in this camcorder from other digital/analog media or devices is protected by the copyright act and cannot be used without permission of the copyright owner except for personal enjoyment. Even if you record an event such as a show, performance or exhibition for personal enjoyment, it is strongly recommended that you obtain permission beforehand.

important safety instructions

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE REFFER
SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

Warning

To Reduce The Risk Of Fire Or Electric Shock, Do Not Expose This Apparatus To Rain Or Moisture.

Caution

Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus. To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachment/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tipping over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

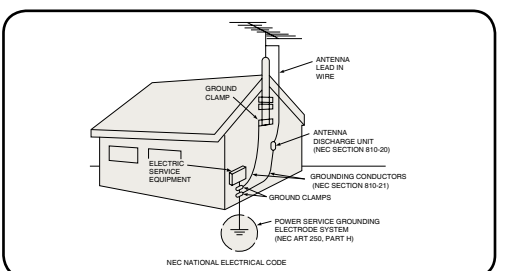
16. VENTILATION:
Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the CAMCORDER and to protect it from overheating. These openings must not be blocked or covered.Never place your CAMCORDER on a bed, sofa, rug, or other similar surface: on or near a radiator or heat register. This CAMCORDER should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

17. POWER SOURCES:
The CAMCORDER should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supply at your home, consult your appliance dealer or local power company. A CAMCORDER is intended to be operated from battery power, or other sources, refer to the operating instructions.

18. GROUNDING OR POLARIZATION:
This CAMCORDER may be equipped with either a polarized 2-wire AC line plug (a plug having one blade wider than the other) or a 3-wire grounding type plug, a plug having a third (grounding) pin. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your outlet. Do not defeat the safety purpose of the polarized plug.

19. POWER-CORD PROTECTION:
Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords or plugs, convenient receptacles, and the point where they exit from the unit.

20. OUTDOOR ANTENNA GROUNDING:CAMCORDER, be sure the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges, Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire and supporting structure, grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding to conductors, location of antenna-discharge unit, connection to grounding electrodes and requirements for the grounding electrode. See figure below.


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
NEC NATIONAL ELECTRICAL CODE

21. LIGHTNING:
For added protection of this CAMCORDER during a lightning storm or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the CAMCORDER due to lightning and powerline surges.

important safety instructions

22. POWER LINES:
An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

23. OVERLOADING:
Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

24. OBJECTS AND LIQUIDS:
Never push objects of any kind into this CAMCORDER through openings as they may touch dangerous voltage points or short out a part that could result in a fire or electric shock. Never spill liquids of any kind onto the CAMCORDER. Should spillage occur, unplug unit and have it checked by a technician before use.

25. SERVICING:
Do not attempt to service this CAMCORDER yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

26. DAMAGE REQUIRING SERVICE:
Unplug this CAMCORDER from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. When the power-supply cord or plug is damaged.
b. If any liquid has been spilled onto, or objects have fallen into the CAMCORDER.
c. If the CAMCORDER has been exposed to rain or water.
d. If the CAMCORDER does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the CAMCORDER to its normal operation.
e. If the CAMCORDER has been dropped or the cabinet has been damaged.
f. When the CAMCORDER exhibits a distinct change in performance, this indicates a need for service.

27. REPLACEMENT PARTS:
When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer and has the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

28. SAFETY CHECK:
Upon completion of any service or repairs to this CAMCORDER, ask the service technician to perform safety checks to determine that the CAMCORDER is in safe operating order.

29. To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or moisture.
30. If this power supply is used at 240V ac, a suitable plug adaptor should be used.
31. This product is covered by one or more of the following U.S. patents:
5,060,220 5,457,669 5,561,649 5,705,762 5,987,417 6,043,912 6,222,983 6,272,096 6,377,524 6,377,531 6,385,587 6,389,570 6,408,408 6,466,532 6,473,736 6,477,501 6,480,829 6,556,520 6,556,521 6,556,522 6,578,163 6,594,208 6,631,110 6,658,588 6,674,697 6,674,957 6,687,455 6,697,307 6,707,985 6,721,243 6,721,493 6,728,474 6,741,535 6,744,713 6,744,972 6,765,853 6,765,853 6,771,890 6,771,891 6,775,465 6,778,755 6,788,629 6,788,630 6,795,637 6,810,201 6,862,256 6,868,054 6,894,963 6,937,552

USER INSTALLER CAUTION:
Your authority to operate this FCC certified equipment could be voided if you make changes or modifications not expressly approved by this party responsible for compliance to part 15 FCC rules.

NOTE:
(Hg) LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE OR FEDERAL LAWS. For details see lamprecycle.org, eiae.org, or call 1-800-Samsung (7267864)

CALIFORNIA USA ONLY
This Perchlorate warning applies only to primary CR (Manganese Dioxide) Lithium coin cells in the product sold or distributed ONLY in California USA
" Perchlorate Material - special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate."

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help and for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This Booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

FCC Warning
The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.
This device complies with Part 15 of FCC Rules.
Operation is subject to the following two conditions;
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

important information on use

IMPORTANT NOTE

- **Handle the liquid crystal display (LCD) with care:**
  - The LCD is a very delicate display device: Do not press its surface with excessive force, hit it or prick it with a sharp object.
  - If you push the LCD surface, display unevenness may occur. If unevenness does not disappear, turn the camcorder off, wait for a few moments, and then turn it on again.
  - Do not place the camcorder with the open LCD screen down.
  - Close the LCD monitor when not using the camcorder.
- **Liquid crystal display:**
  - The LCD screen is a product of high precision technology. Out of the total pixels (approx. 230,000 pixels of an LCD monitor), 0.01% or less pixels may be out (black dots) or may remain lit as colored dots (red, blue, and green). This shows the limitations of the current technology, and does not indicate a fault that will interfere with recording.
  - The LCD screen will be slightly dimmer than usual when the camcorder is at low temperature, as in cold areas, or right after the power is turned on. Normal brightness will be restored when the temperature inside the camcorder rises. Note that this will have no effect on the image in a storage media, so there is no cause for concern.
- **Hold the camcorder correctly:**
  - Do not hold the camcorder by the LCD monitor when lifting it: the LCD monitor could detach and the camcorder may fall.
- **Do not subject the camcorder to impact:**
  - This camcorder is a precision machine. Take great care that you do not strike it against a hard object or let it fall.
  - Do not use the camcorder on a tripod in a place where it is subject to severe vibrations or impact.
- **No sand or dust!**
  - Fine sand or dust entering the camcorder or AC power adaptor could cause malfunctions or defects.
- **No water or oil!**
  - Water or oil entering the camcorder or AC power adaptor could cause electric shock, malfunctions or defects.
- **Heat on surface of product:**
  - The surface of the camcorder will be slightly warm when used, but this does not indicate a fault.

- **Be careful of unusual ambient temperature:**
  - Using the camcorder in a place where the temperature is over 104°F (40°C) or lower than 32°F (0°C) may result in abnormal recording/playback.
  - Do not leave the camcorder on a beach or in a closed vehicle where the temperature is very high for a long time: This could cause a malfunction.
- **Do not point directly at the sun:**
  - If direct sunlight strikes the lens, the camcorder could malfunction or a fire could occur.
  - Do not leave the camcorder with the LCD screen exposed to direct sunlight: This could cause a malfunction.
- **Do not use the camcorder near TV or radio:**
  - This could cause noise to appear on the TV screen or in radio broadcasts.
- **Do not use the camcorder near strong radio waves or magnetism:**
  - If the camcorder is used near strong radio waves or magnetism, such as near a radio transmitter tower or electric appliances, noise could enter video and audio that are being recorded. During playback of normally recorded video and audio, noise may also be present in picture and sound.
- **Do not expose the camcorder to soot or steam:**
  - Thick soot or steam could damage the camcorder case or cause a malfunction.
- **Do not use the camcorder near corrosive gas:**
  - If the camcorder is used in a place where there is dense exhaust gas generated by gasoline or diesel engines, or corrosive gas such as hydrogen sulphide, the external or internal terminals could corrode, disabling normal operation, or the battery connection terminals could corrode, so that power will not turn on.
- **Do not use the camcorder near an ultrasonic humidifier:**
  - Calcium and other chemicals dissolved in water could scatter in the air, and white particles could adhere to the optical head of the camcorder, which could cause it to operate abnormally.
- **Do not clean the camcorder body with benzene or thinner:**
  - The coating of exterior could peel off or the case surface could deteriorate.
  - When using a chemical cleaning cloth, follow the instructions.
- **Keep a memory card out of reach of children to prevent swallowing.**
- **To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.**

important information on use

ABOUT THIS USER MANUAL

- Thank you for purchasing this Samsung Camcorder. Please read this user manual carefully before you use the camcorder and keep it handy for future reference. Should your camcorder fail to operate correctly, refer to Troubleshooting.
- The 'SMX-K44' and 'SMX-K45' have a 16GB and 32GB built-in memory respectively but also use memory cards. The 'SMX-K40' and 'SMX-K400' does not have built-in memory and uses memory cards exclusively. Although some features of 'SMX-K40', 'SMX-K400', 'SMX-K44' and 'SMX-K45' are different, they operate in the same way.
- Illustrations of model SMX-K40 are used in this user manual.
- The displays in this user manual may not be exactly the same as those you see on the LCD screen.
- Designs and specifications of storage media and other accessories are subject to change without any notice.
- In this user manual's function descriptions, the icon on the on-screen display section means that it will appear on the screen when you set the corresponding function.
  Ex) Submenu item of **"Video Resolution"** ➥page 55

item	contents	on-screen display
"TV Super Fine"	Videos recorded in 720x480(60i) resolution at super-fine image quality.	SF

(If set, corresponding icon (SF) will appear on the screen.)

- Descriptions of the "built-in memory" in this user manual apply only to the following models: SMX-K44(16GB), SMX-K45(32GB)

NOTES REGARDING TRADEMARK

- All the trade names and registered trademarks mentioned in this manual or other documentation provided with your Samsung product are trademarks or registered trademarks of their respective holders.
- Windows® is registered trademark or trademark of Microsoft Corporation, registered in the United States and other countries.
- Macintosh® is trademark of Apple Inc.
- YouTube® is a trademark of Google Inc.
- Flickr® is a trademark of Yahoo! Inc.
- All the other product names mentioned herein may be the trademark or registered trademarks of their respective companies.
- Furthermore, "TM" and "®" are not mentioned in each case in this manual.

precautions during use

The safety precautions illustrated below are to prevent personal injury or material damage. Heed all instructions carefully.

WARNING
Death or risk of serious personal injury.

CAUTION
Means that there is a potential risk of personal injury or material damage.

Prohibited action.

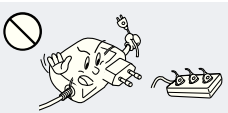
Do not disassemble product.

Do not touch product.

This precaution must be kept.

Unplug from power supply.

WARNING

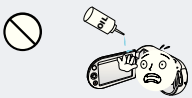


Do not overload outlets or extension cords as this may result in abnormal heat or fire.

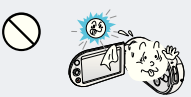
Using the camcorder at temperatures over 140°F (60° C) may result in fire. Keeping the battery at a high temperature may cause an explosion.

Do not allow water or metal and inflammable matter to enter the camcorder or AC power adaptor. Doing so may pose a fire hazard.

No sand or dust! Fine sand or dust entering the camcorder or AC power adaptor could cause malfunctions or defects.

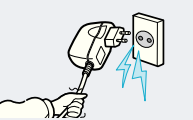


No oil! Oil entering the camcorder or AC power adaptor could cause electric shock, malfunctions or defects.



Do not aim the LCD screen directly into the sun. Doing so could cause eye injuries, as well as lead to malfunctioning of internal parts of the product.

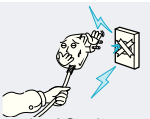
Do not bend the power-cord or damage the AC power adaptor by pressing on it with a heavy object. There may be a risk of fire or electric shock.



Do not disconnect the AC adaptor by pulling on its power-cord, as this could damage the power-cord.

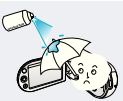
precautions during use

Do not use the AC adaptor if it has damaged, split or broken cords or wires. Doing so may cause fire or electric shock.



Do not connect the AC adaptor unless the plug can be fully inserted with no part of the blades exposed.

Do not dispose of battery pack in a fire as it may explode.



Never use cleaning fluid or similar chemicals. Do not spray cleaners directly on the camcorder.

Keep the camcorder away from water when used near the beach or pool or when it rains. There is a risk of malfunction or electric shock.

Keep the used lithium battery or memory card out of the reach of children. If the lithium battery or memory card is swallowed by children, consult a physician immediately.

Do not attempt to disassemble, repair, or reform the camcorder or the AC adaptor to avoid a risk of fire or electric shock.

Do not plug or unplug the power cord with wet hands. There is a risk of electric shock.

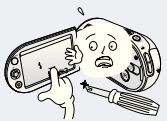
Keep the power-cord unplugged when not in use or during lightning storms to prevent fire hazard.

When cleaning the AC adaptor, unplug the power-cord to avoid a risk of a malfunction or electric shock.

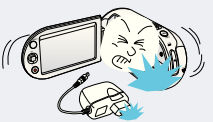
If the camcorder makes an abnormal sound, or smells or smokes, unplug the power-cord immediately and request service from a Samsung service center. There is a risk of fire or personal injury.

If the camcorder malfunctions, immediately detach the AC adaptor or battery from the camcorder immediately to avoid fire or injury.

CAUTION



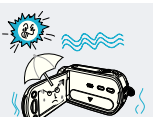
Do not press the surface of the LCD with force, or hit it with a sharp object.
If you push the LCD surface, display unevenness may occur.



Do not drop or expose the camcorder, battery pack, AC adaptor or other accessories to severe vibrations or impact. This may cause a malfunction or injury.

Do not use the camcorder on a tripod (not supplied) in a place where it is subject to severe vibrations or impact.

Do not use the camcorder in direct sunlight or near heating equipment. This will especially shorten the operation range of the remote control which uses infrared rays.



Do not expose the camcorder to sand or water when recording at the beach or pool, or recording on a rainy day. Doing so may cause a malfunction or electric shock.

Do not leave the camcorder in a closed vehicle where the temperature is very high for a long time.

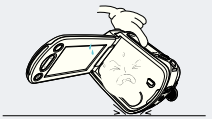
Do not expose the camcorder to soot or steam. Thick soot or steam could damage the camcorder case or cause a malfunction.

Do not use the camcorder near dense exhaust gas generated by gasoline or diesel engines, or corrosive gas such as hydrogen sulphide. Doing so may corrode the external or internal terminals, disabling normal operation.

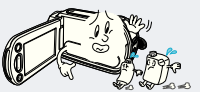
Do not expose the camcorder to insecticide. Insecticide entering the camcorder could cause the product to operate abnormally. Turn the camcorder off and cover it with vinyl sheet, etc. before using insecticide.

precautions during use

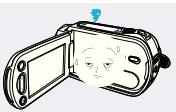
Do not expose the camcorder to sudden changes in temperature or humid places. There is also a risk of defect or electric shock when using outdoors during lightning storms.



Do not place the camcorder with the open LCD screen down.

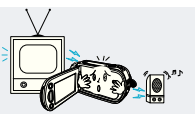


Do not wipe the camcorder body with benzene or thinner. The exterior coating could peel off or the case surface could deteriorate.

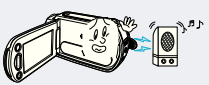


Do not leave the LCD monitor open when not using the camcorder.

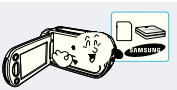
Do not hold the camcorder by the LCD monitor when lifting it. The LCD monitor could detach and the camcorder may fall.



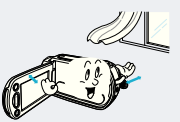
Do not use the camcorder near TV or radio. This could cause noise on the TV screen or to radio broadcasts.



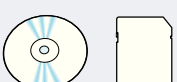
Do not use the camcorder near strong radio waves or magnetism such as speakers or large motors. Noise could enter video or audio that is being recorded.



Use Samsung-approved accessories only. Using products from other manufacturers may cause overheating, fire, explosion, electric shock or personal injuries due to abnormal operation.



Place the camcorder on a stable surface and a place with ventilation openings.



Keep important data separately. Samsung is not responsible for data loss.

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quick start guide

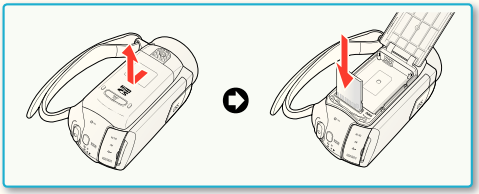
✪ This quick start guide introduces the basic operation and features of your camcorder. See the reference pages for more information.

You can record videos in H.264 format!

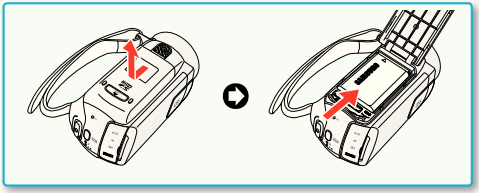
You can record videos in H.264 format, which enables you to conveniently email and share videos with your friends and family. You can also take photos with your camcorder.

Step1: Get ready

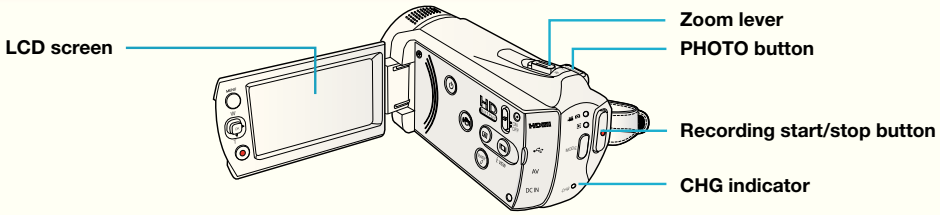
1. Insert a memory card. ➥page 37
- You can use commercially available SDHC (SD High Capacity) cards with this camcorder.
- Set the appropriate storage media. ➥page 36 (SMX-K44/K45 only)



2. Insert the battery into the battery slot. ➥page 16



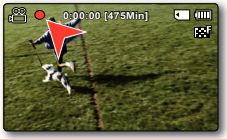
Step 2: Record with your camcorder



RECORDING VIDEOS WITH H.264 FORMAT

Your camcorder uses advanced H.264 compression technology to realize the clearest video quality. ➥page 109

1. Open the LCD screen to turn on the camcorder.
   - Your camcorder turns on automatically when you open the LCD screen.
   - You can also turn the camcorder on by pressing the **Power** (⏻) button.
2. Press the **Recording start/stop** button.
   - To stop recording, press the **Recording start/stop** button.



RECORDING PHOTOS

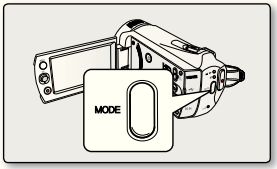
1. Open the LCD screen to turn on the camcorder.
   - Your camcorder turns on automatically when you open the LCD screen.
   - You can also turn the camcorder on by pressing the **Power** (⏻) button.
2. Press the **PHOTO** button fully when you are ready.

- Your camcorder is compatible with H.264 recording format, which achieves efficient coding of high quality video with less capacity.
- You can record videos in SD (standard definition). The default setting is **“TV Fine (720x480/60i).”** ➥page 55
- You can not take photos while you are recording videos.

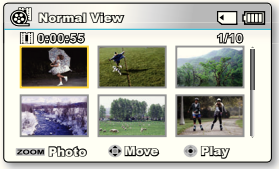
Step 3: Play back videos or photos

VIEWING THE LCD SCREEN OF YOUR CAMCORDER

You can find your desired recordings quickly by using the thumbnail index view.



1. Press the **MODE** button to select the Play mode.
   - The thumbnail index view appears. The thumbnail of the latest created or played file is highlighted.
2. Select the Video or Photo thumbnail index view screen.
   - You can simply switch between video and photo thumbnail view using the zoom lever.
3. Use the **Control (▲ /▼ / ◀ / ▶)** button to select a desired video or photo, and then press the **Control** button **(OK)**.



VIEWING ON A TV

- You can enjoy detailed, brilliant quality videos on a connected TV. ➥page 98

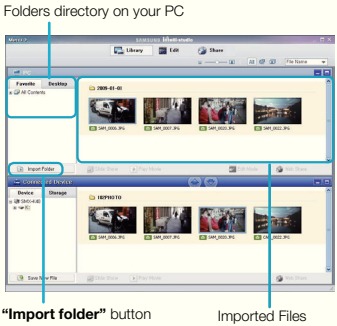
Step 4: Save recorded videos or photos

Simple and fun! Enjoy the various features of Intelli-studio on your Windows computer.

Using the Intelli-studio program built in your camcorder, you can import videos/photos into your computer, edit or share the videos/photos with your friends. For details, see page 102.

IMPORTING AND VIEWING VIDEOS/PHOTOS FROM THE CAMCORDER TO YOUR PC

1. Launch the Intelli-studio program by connecting the camcorder to your PC via the USB cable.
   - A new file saving screen appears with the Intelli-studio main window. Click **"Yes"**, the uploading procedure will start.
2. Click **"Import folder"** to import the videos or photos from the PC to Intelli-studio, you will see the files location on the Intelli-studio browser.
3. You can double-click on the file you would like to start playing.



SHARING VIDEOS/PHOTOS ON YouTube/Flickr

Share your contents with the world, by uploading photos and videos directly to a web site with a single click. Click on the **"Share" → "Upload to Share Site"** tab on the browser. ➥page 106

The Intelli-studio runs automatically once the camcorder is connected to a Windows computer (when you specify **"PC Software: On"**). ➥page 93

Step 5: Delete videos or photos

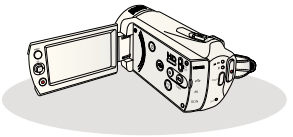
If the storage media is full, you cannot record new videos or photos. Delete videos or photos data that have been saved on a computer from the storage media. Then you can record new videos or photos on newly freed-up space.

Press the MODE button to switch the Play mode → Press the MENU button → Control button (▲ /▼ / ◀ / ▶/OK) to select "Delete." ➥page 72

getting to know your camcorder

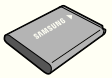
WHAT'S INCLUDED WITH YOUR CAMCORDER

Your new camcorder comes with the following accessories. If any of these items are missing from your box, call Samsung's Customer Care Center.



Model Name	built-in memory	memory card slot	LCD screen	Lens
SMX-K40, SMX-K400	-	1 slot	color	52x (Optical), 65x (Intelli), 2200x (Digital)
SMX-K44	16GB			
SMX-K45	32GB			

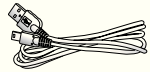
✪ **The exact shape of each item may vary by model.**



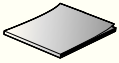
Battery pack
(IA-BH130LB)
AD43-00190A

AC power adaptor
(AA-MA9 type)
AD44-00151A

Audio/Video cable
AD39-00168A



USB cable
AD39-00169A



Quick start guide
AD68-03848A

User manual CD
AD46-00259A

Core filter
3301-001502

Mini HDMI cable
(Optional)
AD39-00159A

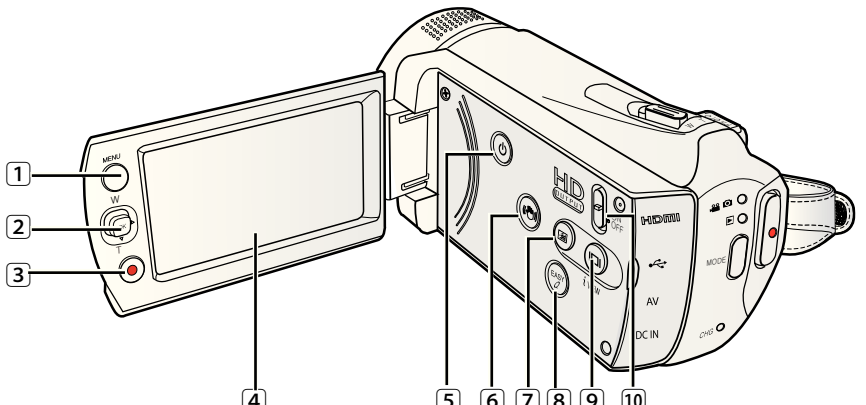
Memory card
(Optional)
1109-001415

Carrying case
(Optional)
AD69-00929A

- The contents may vary depending on the sales region.
- Parts and accessories are available for purchase at your local Samsung dealer. SAMSUNG is not responsible for reduced battery life time or malfunctions caused by any unauthorized use of accessories such as the AC adaptor or the batteries.
- A memory card is not included. See page 38 for memory cards compatible with your camcorder.
- Your camcorder includes a user manual CD and a quick start guide (printed).
- (Optional) : This is an optional accessory. To buy one, contact your nearest Samsung dealer.

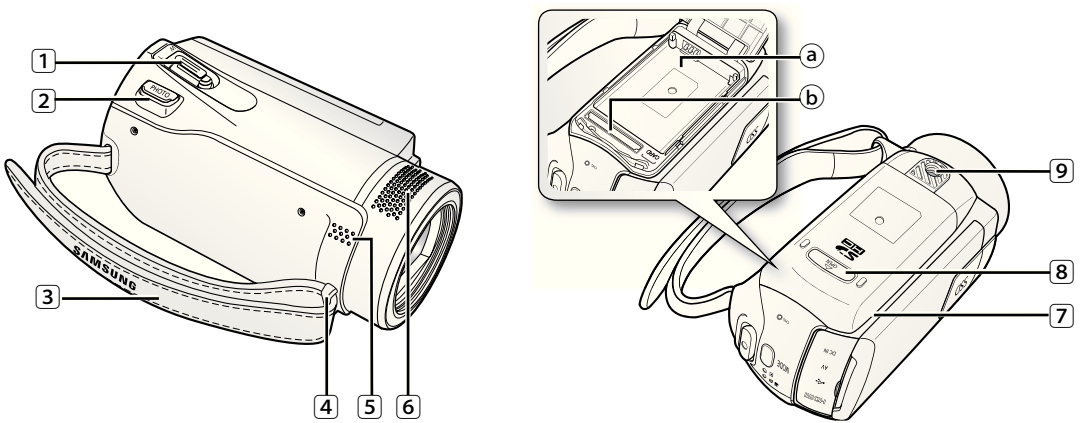
getting to know your camcorder

FRONT & LEFT VIEW



1	MENU button
2	Control button (▲/▼/◀/▶/ OK), Zoom (W/T) button
3	Recording start/stop button
4	LCD screen
5	Power ( ) button
6	Anti-Shake (OIS) ( ) button
7	LCD Enhancer ( ) button
8	EASY Q button
9	Display ( )/*i*VIEW button
10	HD OUTPUT switch (ON/OFF)

RIGHT & TOP / BOTTOM VIEW



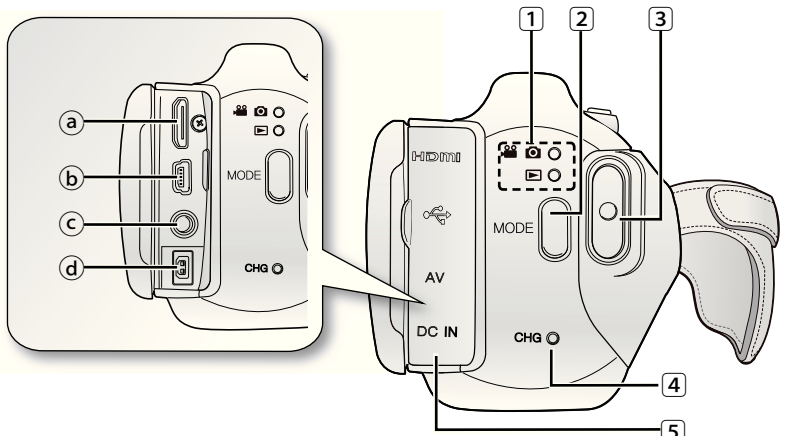
1	Zoom lever (W/T)
2	PHOTO button
3	Grip belt
4	Grip belt hook
5	Built-in speaker
6	Internal microphone
7	Battery pack/ Memory card cover
	ⓐ Battery pack slot
	ⓑ Memory card slot
8	OPEN
9	Tripod receptacle

Usable Memory Card (32GB Max)

SDHC

CAUTION Be careful not to cover the internal microphone and lens during recording.

REAR VIEW



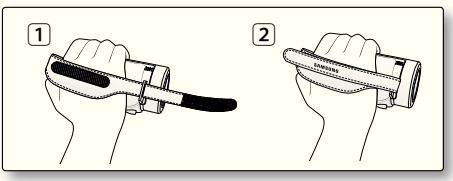
1. Mode indicator
   - : Record mode (Video/Photo)
   - : Play mode
2. MODE button
3. Recording start/stop button
4. CHG (charging) indicator
5. Jack cover
   - ⓐ HDMI jack (HDMI)
   - ⓑ USB jack ( )
   - ⓒ AV jack (AV)
   - ⓓ DC IN jack (DC IN)

preparation

This section provides information that you should know before using this camcorder: such as how to use the provided accessories, how to charge the battery, and how to setup the operation mode and initialize setup.

ATTACHING THE GRIP BELT

Adjust the length of grip belt so that the camcorder is stable when you press the Recording start/stop button with your thumb.



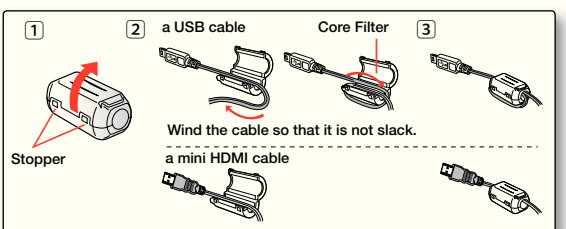
WARNING

Please note if the hand strap is adjusted too tight and you use excessive force to insert your hand, the hand strap hook of the camcorder may be damaged.

ATTACHING THE CORE FILTER

Attach the core filters to the cables. The core filter reduces interference.

1. To open the core filter, release the stoppers on both ends of the core filter.
2. Attach the core filter to the cable near its connecter as shown in the figure.
3. Close the core filter until it clicks shut.

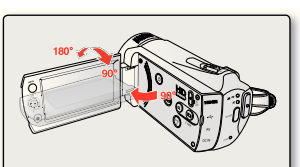


- Take care not to damage the cable.
- When connecting a cable, attach the end with the core filter to the camcorder.

ADJUSTING THE LCD SCREEN

The wide LCD screen on your camcorder offers high quality image viewing.

1. Open the LCD screen with your finger.
   - The screen opens up to 90°.
2. Rotate the LCD screen towards the lens.
   - You can rotate it up to 180° towards the lens and up to 90° backward. To view recordings more conveniently, rotate the screen by 180° towards the lens, then fold it back to the body.



WARNING

Excessive rotation may damage the connective hinge between the screen and the camcorder.

- When the LCD screen is rotated by 180°, the left and right sides of the subject are shown in reverse, which produces horizontally flipped image.
- Remove fingerprints or dust on the screen with a soft cloth.

CONNECTING A POWER SOURCE

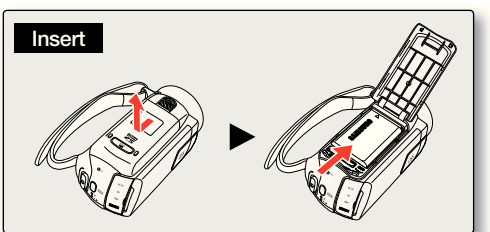
- Be sure to charge the battery pack before you start using your camcorder.
- Use the **IA-BH130LB** battery pack only.
- The battery pack may be charged a little at the time of purchase.

Battery pack insertion/ejection

It is recommended you purchase one or more additional battery packs to allow continuous use of your camcorder.

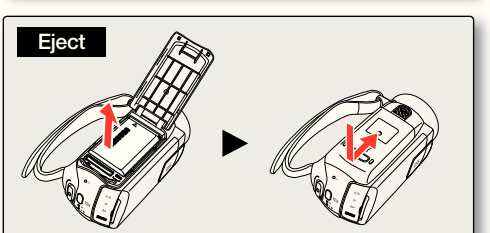
Inserting the battery pack

1. Slide and open the battery slot cover as shown in the figure.
2. Insert the battery pack into the battery slot until it locks.
   - Make sure that the SAMSUNG logo is facing up while the battery pack is placed as shown in the figure.
3. Slide and close the battery slot cover.



Ejecting the battery pack

1. Pull the ejected battery out in the direction as shown in the figure.
2. Slide and close the battery slot cover.



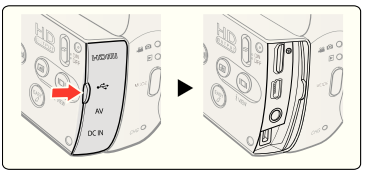
- Remove the battery pack separately from the camcorder while not in use.
- We recommend preparing an additional battery pack for prolonged outdoor use.
- Additional battery packs can be purchased from samsungparts.com.

Charging the battery

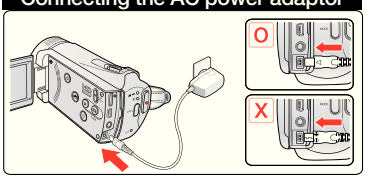
You can charge the battery using the AC power adaptor or USB cable.

1. Press the **Power** (⏻) button to turn off the camcorder. ➥page 23
2. Insert the battery in the camcorder. ➥page 16
3. Open the connector cover of the unit.
4. Charge the battery using the **AC power adaptor or USB cable**.
   - The CHG (charge) lamp lights up and charging starts. When the battery is fully charged, the charging (CHG) lamp turns green. ➥page 18

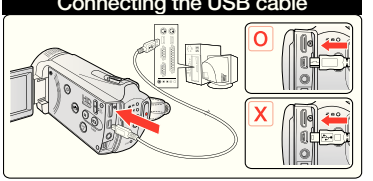
Using the AC power adaptor	Connect the AC power adaptor to the camcorder properly and plug the AC power adaptor in the wall outlet.
Using the USB cable	Connect the USB cable to the camcorder properly and connect the other end to a USB port of a PC.



Connecting the AC power adaptor



Connecting the USB cable



CAUTION

- Charging the battery pack at low temperature may take longer or fail to fully charge (green indicator will not turn on).
- Please make sure that there are no foreign substances in the plug and socket when you connect the AC power supply to the camcorder.
- Fully charge the battery pack before use.
- When using the AC power supply, place it close to the wall outlet. If you experience a malfunction while using the camcorder, separate the AC power supply immediately from the wall outlet.
- Do not use the AC power supply in a tight space, such as between furnishings.

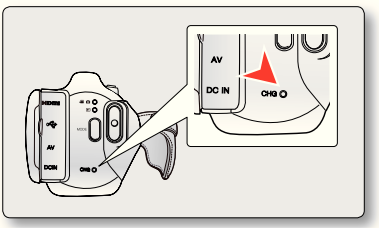
- When recording indoors with an available wall outlet, it is convenient to use the AC power supply instead of the battery pack.
- It is recommended to charge the battery pack in a place with ambient temperature of 50°F~86°F (10°C ~ 30°C).
- When charging, if both the USB cable and AC power adaptor are connected, the AC power adaptor will override the USB.
- If the camcorder is turned on, the battery will still charge, but more charging time will be needed. It is recommended you to keep the camcorder turned off while charging.

Charging indicator

Tips for battery identification

✪ The color of the LED indicates the charging status.

- If the battery has been fully charged, the charge indicator is green.
- While the battery is being charged, the charge indicator lights orange.
- If an error occurs while the battery is being charged, the charge indicator blinks orange.



<Charging indicator>

Charging (CHG) lamp

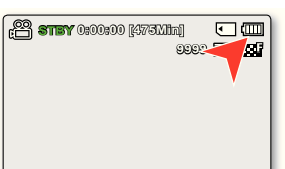
The color of the charging indicator shows the charging state.

Charging state	Charge		
	Charging	Fully Charged	Error
LED Color	(Orange)	(Green)	(Orange Blink)

Battery Level Display

The Battery Level Display shows the amount of battery power remaining in the battery pack.

Battery Level Indicator	State	Message
	Fully charged	-
	20%~40% used	-
	40%~60% used	-
	60%~80% used	-
	80%~99% used	-
	Exhausted (flickers): The device will soon turn off. Change the battery pack as soon as possible.	-
-	(flickers): The device will be forced to turn off after 3 seconds.	**"Low battery"**



- Before using the camcorder, charge the battery.
- Above figures are based on a fully charged battery pack at normal temperature. Low ambient temperature may affect the use time.

Charging, recording and playback times with fully charged battery pack (with no zoom operation, etc.)

- For your reference, the approximate time with fully charged battery pack:

Battery type		IA-BH130LB				
Charging time		Using the AC power adaptor			approx. 2 hr.	
		Using the USB cable			approx. 4 hr.	
Video resolution		720 x 480 (60i)			640 x 480 (30p)	
		TV Super Fine ( )	TV Fine ( )	TV Normal ( )	Web Fine ( )	Web Normal ( )
Mode	Continuous recording time	approx. 120min.				
	Playback time	approx. 130min.				

- The time is only for reference. Figures shown above are measured under Samsung's test environment, and may differ according to user and condition.
- We recommend using the AC power adaptor when using the Time Lapse REC function.

Continuous Recording (without zoom)

The continuous recording time of the camcorder in the table shows the available recording time when the camcorder is in the recording mode without using any other function after recording starts. When actually recording, the battery pack may discharge 2-3 times faster than this reference, since the record start/stop and zoom functions are being operated, and playback is performed. Prepare additional charged battery pack(s) to allow for the time you are planning to record on the camcorder. Note that the battery pack discharges faster in a cold environment.

About the battery pack

- The benefits of the battery pack: the Battery pack is small but has a large power capacity. It should be recharged at temperatures between 50°F ~ 86°F (10°C ~ 30°C).
  However, when it is exposed to cold temperatures (below 32°F (0°C)), its usage time is reduced and it may cease to function. If this happens, place the battery pack in your pocket or any other warm, protected place for a short time, then reattach it to the camcorder.
- The continuous recording times in the operating instructions are measured using a fully charged battery pack at 25 °C (77 °F). As the environmental temperature and conditions vary, the remaining battery time may differ from the approximate continuous recording times given in the instructions.

Handling the battery pack

- To preserve battery power, keep your camcorder turned off when you are not operating it.
- To save battery power, you can set the **"Auto Power Off"** function, which turns off the camcorder if there is no operation for 5 minutes. To disable this option, change the setting of **"Auto Power Off"** to **"Off."** ➥page 91
- Do not allow metallic objects to come into contact with the terminals.
- Make sure that the battery pack fits firmly into place. Do not drop the battery pack.
  Dropping the battery pack may cause damage.
- Be careful to keep the battery pack out of the reach of children. It is a choking hazard if swallowed.
- Frequent use of the LCD screen or using the fast forward or rewind buttons wears out the battery pack faster.
- Remove the battery pack from the camcorder for safekeeping after using your camcorder.
- Leaving the battery pack for an extended period of time may discharge the battery pack completely.
  - A battery pack which is completely discharged may not turn on the recharging LED during charging.
    It is designed to protect the battery pack. If the recharging LED turns on normally within 5 minutes, use the battery pack as normal.

Maintaining the battery pack

- We recommend only using the original battery pack that is available from your Samsung retailer. When the battery reaches the end of its life, please contact your local dealer. The batteries have to be dealt with as chemical waste.
- Clean the terminals to remove any foreign substances before inserting the battery.
- Do not put the battery pack near any heat source (i.e. fire or heater).
- Do not disassemble, apply pressure to, or heat the battery pack.
- Do not allow the '+' and '-' terminals of the battery pack to be short-circuited.
  It may cause leakage, heat generation, induce overheating or fire.
- Do not expose the battery pack to water. The battery pack is not water resistant.
- When fully discharged, a battery pack damages the internal cells.
  The battery pack may be prone to leakage when fully discharged.
- Remove the battery pack from the charger or camcorder when not in use. Even when the power is switched off, the battery pack will still discharge if it is left attached to the camcorder.
- When not using the camcorder for an extended period:
  It is recommended that you charge the battery pack once every 6 months, attach it to the camcorder and use it up: then remove the battery pack and store it in a cool place.

About the battery life

- Battery capacity decreases over time and through repeated use. If decreased usage time between charges becomes significant, it is probably time to replace it with a new one.
- Each battery's life is governed by storage, operating and environmental conditions.

Use only Samsung-approved battery packs.
Do not use batteries from other manufacturers because there is a danger of overheating, fire or explosion.
Samsung is not responsible for problems occurring due to using unapproved batteries.

Using a household power source

Make the same connections as you do when charging the battery pack.
The battery pack will not lose its charge in this case.

Using the camcorder with the AC power adaptor

It is recommended that you use the AC power adaptor to power the camcorder from a household AC outlet when you perform settings on it, play back, or use it indoors.

- Make the same connections as you do when charging the battery pack. ➥page 17

CAUTION

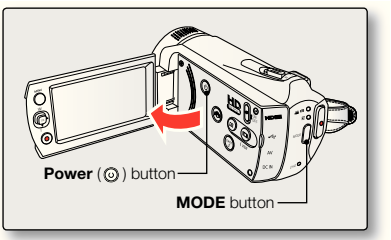
- Before detaching the power source, make sure that the camcorder's power is turned off.
  Failure to do so can result in camcorder malfunction.
- Use a nearby wall outlet when using the AC power adaptor. Disconnect the AC power adaptor from the wall outlet immediately if any malfunction occurs while using your camcorder.
- Do not use the AC power adaptor in a narrow space, such as between a wall and furniture.

- Be sure to use the specified AC power adaptor to power the camcorder.
  Using other AC power adaptors could cause electric shock or result in fire.
- The AC power adaptor can be used around the world. An AC plug adaptor is required in some foreign countries. If you need one, purchase it from your distributor.

BASIC OPERATION OF YOUR CAMCORDER

This section explains the basic techniques of recording videos or photos and also basic settings on your camcorder. Set the appropriate operation mode according to your preference using the **Power** (⏻) and **MODE** buttons.

Turning the camcorder on or off



1. Open the LCD screen to turn the camcorder on.
   - Your camcorder turns on automatically when you open the LCD screen.
   - The lens opens automatically when the camcorder is powered on.
   - You can also turn the camcorder on by pressing the **Power** (⏻) button.
2. To turn off the camcorder, press the **Power** (⏻) button.
   - Closing the LCD screen will not turn the camcorder off.

Setting the operating modes

- You can switch the operating mode in the following order each time you press the **MODE** button.
  Each time the operational mode changes, the respective mode indicator lights up.
  - Record mode → Play mode → Record mode

Mode	Functions
Record mode	To record videos or photos.
Play mode	To play videos or photos, or edit them.

When using this camcorder for the first time

- When you use your camcorder for the first time or reset it, the time zone screen appears for the startup display. Select your geographical location and set the date and time. If you do not set the date and time, the time zone screen appears every time you turn on the camcorder.

- This camcorder provides one record mode for both video and photo recordings.
  You can easily record videos or photos in the same mode without having to switch modes.
- When the camcorder is turned on, the self-diagnosis function operates and a message may appear.
  In this case, refer to "Warning indicators and messages" (on pages 114-116) and take corrective action.

SWITCHING TO THE POWER SAVING MODE

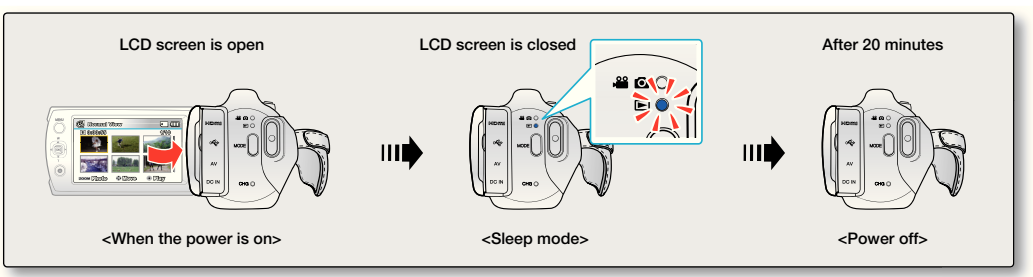
If you need to use camcorder for the extended time, the following functions enable you to prevent unnecessary energy consumption.

In STBY mode:

- The camcorder switches to **"Quick On STBY"** mode when the LCD screen is closed. ➥page 92

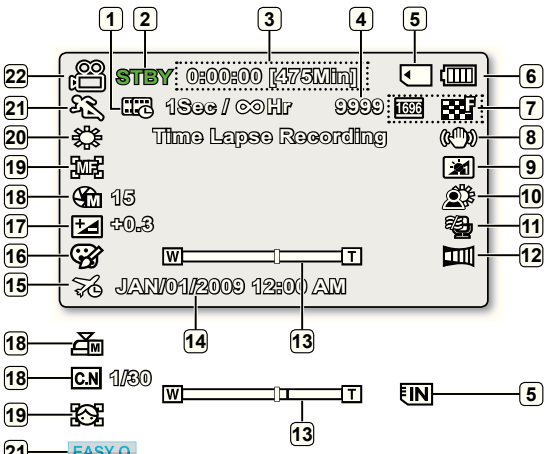
In Playback mode (Includes the thumbnail view mode):

- The camcorder switches to the sleep mode when the LCD screen is closed, and then if idle for more than 20 minutes the camcorder turns off. However, if **"Auto Power Off: 5 Min"** is set, the camcorder turns off in 5 minutes.
- If you open the LCD screen or connect a cable to the camcorder during sleep mode, the sleep mode ends and returns back to the last used operation mode.



- **The power saving mode does not work in the following situations:**
  - When the camcorder has a cable connection. (USB, AV or HDMI)
  - While recording, playback, or the slideshow is being operated.
  - When the LCD screen is opened.
- The camcorder consumes the less battery power in the power saving mode (about 50% of the power consumption in the standby mode) However, if you plan to use the camcorder for the maximum length of time period, it is recommended to turn off the camcorder by pressing the **Power** (⏻) button when not using it.

LCD SCREEN INDICATORS

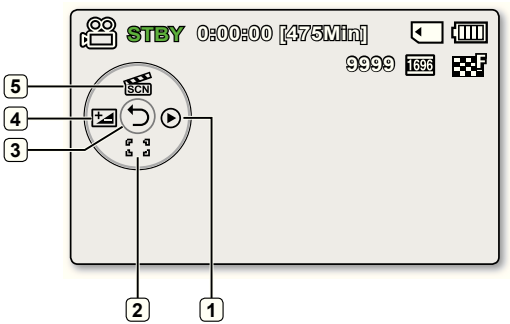


- The above screen is an example for explanation: It is different from the actual display.
- The on-screen indicators are based on an 16GB SDHC memory card capacity.
- Functions marked with * will not be kept when the camcorder is turned off and on again.
- For enhanced performance, the display indications and the order are subject to change without prior notice.
- This camcorder provides one combined video and photo record mode. You can easily record videos or photos in the same mode without having to change it.
- The total number of recordable photos is counted based on available space on the storage media.
- The number of recordable photos on the OSD is a maximum of 9,999.

Video and Photo record mode

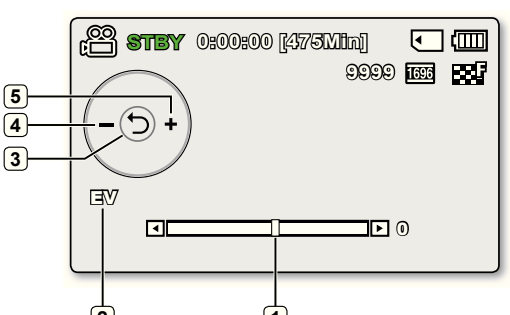
1	Time Lapse REC *
2	Operating mode (STBY (Standby) / ● (Recording))
3	Time counter (Video recording time: remaining recordable time)
4	Photo image counter (Total number of recordable photos)
5	Storage media (Memory card or built-in memory (SMX-K44/K45 only))
6	Battery info. (Remaining battery level)
7	Photo Resolution / Video Resolution
8	Anti-Shake (OIS)
9	LCD Enhancer *
10	Back Light
11	Wind Cut
12	Fader *
13	Zoom (Optical Zoom / Intelli-Zoom / Digital Zoom)
14	Date/Time Display
15	Time Zone
16	Digital Effect
17	EV (Exposure Value) *
18	Manual Aperture */ Manual Shutter Speed */ C.Nite *
19	Manual Focus * / Face Detection *
20	White Balance
21	iSCENE / EASY Q
22	Record mode (/)

LCD SCREEN INDICATORS



Video and Photo record mode : Shortcut menu (OK Guide)

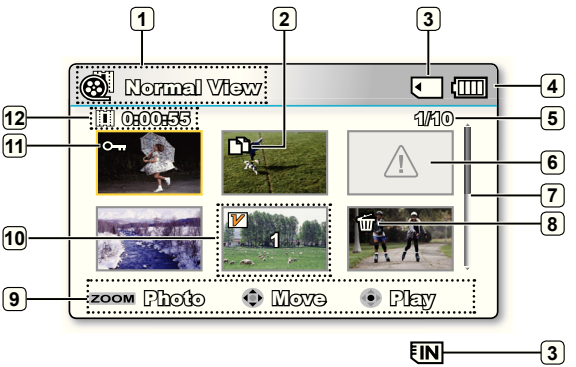
1	Quick View
2	Focus* (Auto Focus/Face Detection/Manual Focus)
3	Shortcut menu (OK Guide) / Return
4	EV (Exposure Value) *
5	iSCENE



Video and Photo record mode : Shortcut menu (Manual)

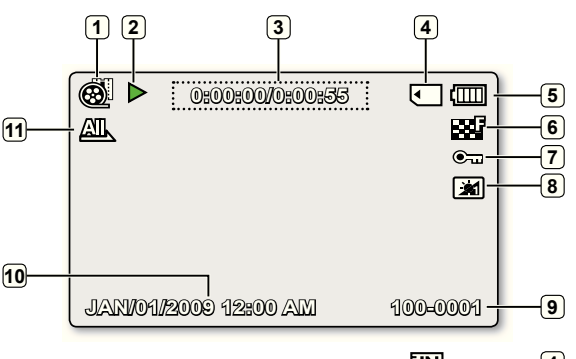
1	Manual Control Bar/ Value
2	Menu name
3	Shortcut menu (OK Guide) / Return
4	Value adjust (down)
5	Value adjust (up)

- The illustration to the left shows the EV (Exposure Value) screen.
- Functions marked with * will not be kept when the camcorder restarts.
- The shortcut menu (OK guide) represents the most frequently accessed functions according to the selected mode. Pressing the **OK** button will display a shortcut menu of frequently used functions on the LCD screen.



Video Play mode : Thumbnail View

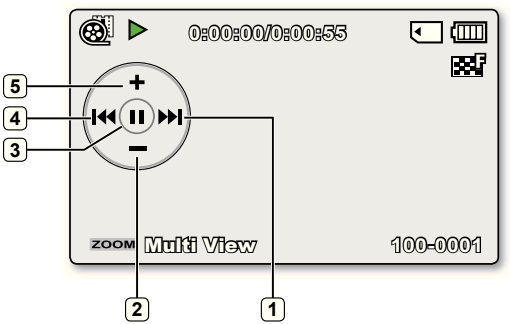
1	Video Play mode
2	Copy Selected (SMX-K44/K45 only)
3	Storage media (Memory card or built-in memory (SMX-K44/K45 only))
4	Battery info (Remaining battery level)
5	Now / Total file number
6	Error File
7	Scroll bar
8	Delete Selected
9	Button Guide
10	Edit (Combine)
11	Protection
12	Recorded time



Video Play mode : Single View

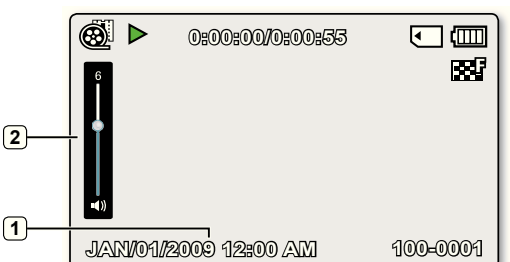
1	Video Play mode
2	Play Status (Play (▶) / Pause (❚❚))
3	Time code (Elapsed time / Recorded time)
4	Storage media (Memory card or built-in memory (SMX-K44/K45 only))
5	Battery info (Remaining battery level)
6	Video Resolution
7	Protection
8	LCD Enhancer
9	File Name (File number)
10	Date/Time Display
11	Play Option

LCD SCREEN INDICATORS



Video Play mode : Shortcut menu (OK Guide)

1	Reverse playback search ➥page 33 (Skip/Search/Slow motion/Frame-by-frame)
2	Volume Down
3	Play (▶) / Pause (❚❚)
4	Forward playback search ➥page 33 (Skip/Search/Slow motion/Frame-by-frame)
5	Volume Up



Video Play mode : Single (Volume)

1	Date/Time Display
2	Volume Bar

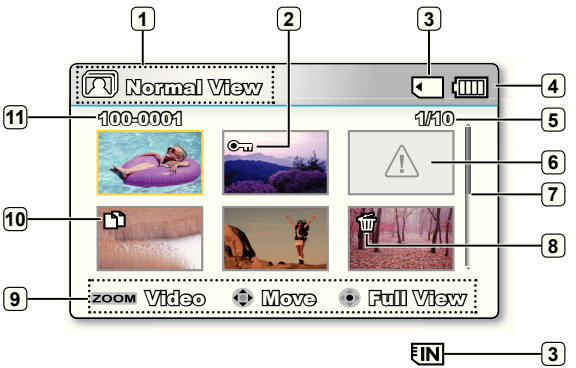


Photo Play mode : Thumbnail View

1	Photo Play mode
2	Protection
3	Storage media (Memory card or built-in memory (SMX-K44/K45 only))
4	Battery info (Remaining battery level)
5	Now / Total file number
6	Error File
7	Scroll bar
8	Delete Selected
9	Button Guide
10	Copy Selected (SMX-K44/K45 only)
11	File name (File number)

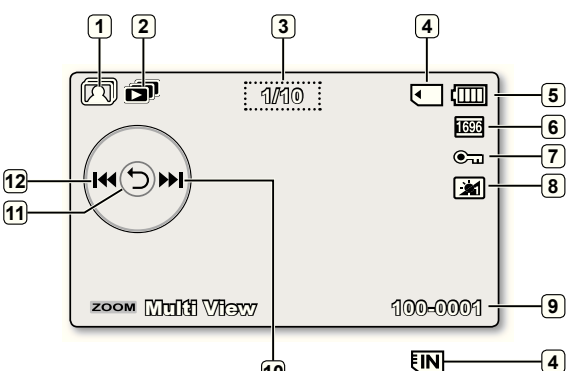


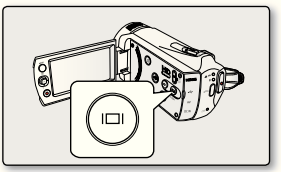
Photo Play mode : Single View

1	Photo Play mode
2	Slide Show
3	Image counter (Current image / total number of recorded images)
4	Storage media (Memory card or built-in memory (SMX-K44/K45 only))
5	Battery info (Remaining battery level)
6	Photo Resolution
7	Protection
8	LCD Enhancer
9	File name (File number)
10	OK Guide (Next image)
11	Shortcut menu (OK Guide) / Return
12	OK Guide (Previous image)

TURNING THE SCREEN INDICATORS ON/OFF ( )

Switching the information display mode

- You can switch the on-screen information display mode:
  Press the **Display ( )** button while the camcorder is on.
  The full and minimum display modes will alternate.
- **Full display mode**: All relevant information will appear.
  Minimum display mode: Only operating status indicators will appear.



<Minimum display mode>

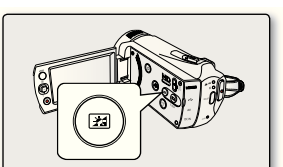
- If the camcorder has warning information, a warning message will appear.
- In the menu screen, the **Display ( )** button will be deactivated.
- To activate iVIEW function, press the **Display** ( ) button in thumbnail index view screen. ➥page 75

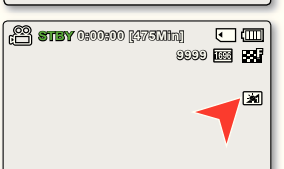
USING THE LCD ENHANCER FUNCTION

- Contrast is enhanced for a clear and bright image. This effect is also implemented outdoors in bright daylight.
- You can also adjust the screen brightness in two-level increments.

1. Press the **LCD ENHANCER** ( ) button.
- LCD adjust ( ) indicator appears and the LCD brightens.

2. You can switch the LCD enhancer function in the following order each time you press the **LCD ENHANCER** ( ) button.
- LCD enhancer **1-**level ( ): LCD enhancer is executed.
- LCD enhancer **2-**level ( ): You can make a brighter-screen than using just one-level adjustment.

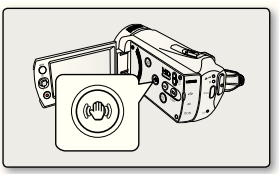


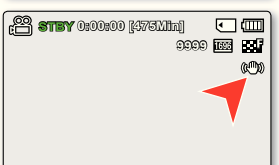


- LCD enhancer function does not affect the quality of the image being recorded.
- When LCD enhancer operates in low illumination, some stripes may occur on the LCD screen. It is not a malfunction and will not be recorded on your video.
- Using the LCD Enhancer function may cause colors to look different on the display.

SETTING THE ANTI-SHAKE (OIS: OPTICAL IMAGE STABILIZER) (✋)

- This function works only in Record mode. ➥page 23
- Anti-Shake (OIS) is a function that, within reasonable limits, compensates for shaking movements produced when filming hand-held. Anti-Shake (OIS) provides a more stable image when:
  - Recording with deep zooming
  - Recording a close up picture of a small object
  - Recording while walking, or moving
  - Recording through the window, from inside a vehicle





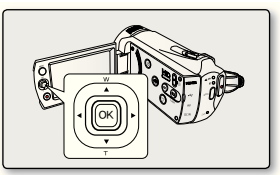
Press the Anti-Shake (OIS) ( ) button to toggle the Anti-Shake (OIS) mode between On and Off.

- The EASY Q mode automatically sets the Anti-Shake (OIS) to On.
- When Anti-Shake (OIS): On is set, there will be a slight difference between the actual movement and the movement on screen.
- Excessive camcorder shake may not be entirely corrected even if Anti-Shake (OIS): On is set. Firmly hold the camcorder with both hands.
- It is recommended that you specify Anti-Shake (OIS): Off when using the camcorder on a desk or tripod (not supplied).
- When you record images with high magnification and the Anti-Shake (OIS) is set to On in dark locations, after-images may stand out. In this case, we recommend using a tripod (not supplied) and turning the Anti-Shake (OIS) to Off.

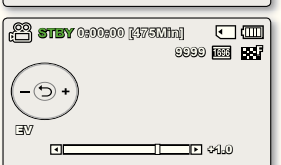
SHORTCUT MENU (OK GUIDE)

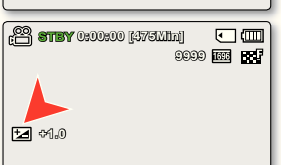
The Shortcut menu (OK guide) represents the most frequently accessed functions according to the selected mode.

✪ For example: Setting EV (Exposure Value) in the Record mode using the Shortcut menu (OK guide).



1. Press the **OK** button in STBY mode.
   - The Shortcut menu (OK guide) is displayed.
2. Press the **Control** button (◀) to select **"EV"** mode.
   - Press the **Control** button (◀ / ▶) to adjust the exposure while viewing the image on the LCD screen.
3. Press the **OK** button to confirm your selection.
   - Press the **OK** button to exit the shortcut menu.
   - Exposure value setting will be applied and (EV XX) indicator and setting value are displayed.





- The Shortcut menu (OK guide) cannot be used in the EASY Q mode.
- Before selecting a menu item, please check that you set the appropriate mode first.

SHORTCUT FUNCTION USING THE CONTROL BUTTONS

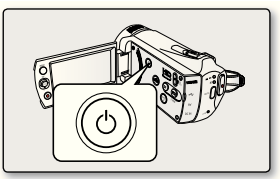
Button	Record (/) mode	Play () mode		Menu selection
		Video Play ( ) mode	Photo Play ( ) mode	
OK	- Access the shortcut menu - Confirm selection - Exit the shortcut menu	- Shortcut menu (OK guide) is displayed - Playback / Pause	Single image playback	Confirms selection
UP	**- iSCENE** **- Zoom (wide)**	Increases the volume	Increases the volume	Moves the cursor up
DOWN	**- Focus** **- Zoom (tele)**	Decreases the volume	Decreases the volume	Moves the cursor down
LEFT	**EV**	- Search playback RPS (Reverse Playback Search) rate: x2→x4→x8→x16 - Frame-by-frame playback - Slow motion playback (Reverse slow playback) rate: x1/2→x1/4→x1/8→x1/16 - Previous Skip Playback	Previous image	Moves to the previous menu
RIGHT	**Quick View**	- Search playback FPS (Forward Playback Search) rate: x2→x4→x8→x16 - Next Skip Playback - Frame-by-frame playback - Slow motion playback (Forward slow playback) rate: x1/2→x1/4→x1/8→x1/16	Next image	Moves to the next menu

INITIAL SETTING : TIME ZONE, DATE AND TIME & OSD LANGUAGE

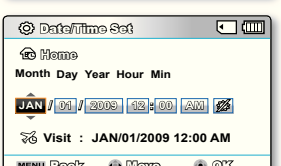
- Initial setting is available in all operating modes.
- To read the menus or messages in your desired language, set the OSD language.
- To store the date and time during recording, set the time zone and date/time.

Turning the power on and setting the date and time

Set the date and time when using the camcorder for the first time. If you do not set date and time, the date and time (time zone) screen appears every time you turn on your camcorder.



1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
   - When you turn on your camcorder for the first time, the Time Zone screen appears based on London, Lisbon. (Greenwich Mean Time)
   - You can also set the **"Time Zone: Home"** from the Settings (⚙) menu. ➥page 86
2. Select your geographical area with **Control** button (◀ / ▶), then press the **OK** button.
   - The Date/Time Set screen appears.
3. Select the date and time information, and change the setting values by using the **Control** button (▲ / ▼ / ◀ / ▶).
4. Make sure the clock is correctly set, and then press the **OK** button.



- The year can be set up to 2037, using the **"Home"** menu.
- Activating the (⚙) icon forwards the time by 1 hour.
- **Charging the built-in rechargeable battery**
  The built-in battery is always recharged while your camcorder is connected to the AC power or while the battery pack is attached. If the camcorder is not in use for about **2 months** without connecting to the AC power or attaching the battery pack, the built-in battery fully discharges. If this occurs, charge the built-in battery by connecting to the supplied AC adaptor for 24 hours.
- After setting, the date and time are automatically recorded on a special data area of the storage media.

Turning the date and time display on/off

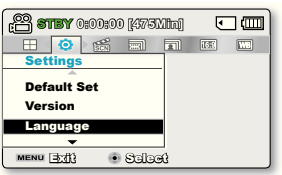
- To switch the date and time display on or off, access the menu and change the Date/Time Display mode. ➥page 89

Simple setting of the clock by time difference

- You can easily set the clock to the local time by setting a time difference when using your camcorder abroad. Select **"Time Zone"** on the menu, then set the time difference. ➥page 86

Selecting the OSD language

You can select the desired language to display the menu screen and the messages.



1. Press the **MENU** button.
   - The menu screen appears.
2. Press the **Control** button (◀ / ▶) to select **"Settings."**
   - The menus in **"Settings"** mode will appear.
3. Press the **Control** button (▲ / ▼) to select **"Language"**, and then press the **OK** button.
4. Press the **Control** button (▲ / ▼) to select the desired OSD language, and then press the **OK** button.
   - English / 한국어/ Français / Deutsch / Italiano / Español / Português / Nederlands / Svenska / Suomi / Norsk / Dansk / Polski / Čeština / Slovensky / Magyar / limba română / Български / Ελληνικά / српски / Hrvatski / Українська / Русский / 中文 / ไทย / Türkçe / ایرانی / العربية/ IsiZulu
5. Press the **MENU** button to exit the menu.
   - The OSD language is refreshed in the selected language.

- Even if battery pack or AC power are removed, the language setting will be preserved.
- The **"Language"** options may be changed without prior notice.
- The date and time format may change depending on the selected language.

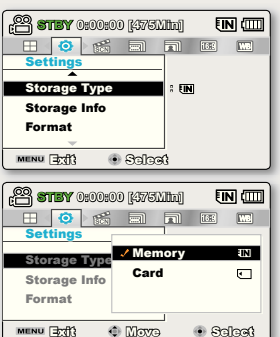
about the storage media

SELECTING THE STORAGE MEDIA (SMX-K44/K45 ONLY)

- You can record on the built-in memory or a memory card, so you should select the desired storage media before starting recording or playback.
- You can use SDHC cards on your camcorder.
  (Some cards are not compatible depending on a memory card manufacturer and memory card type.)
- Before inserting or ejecting a memory card, turn the camcorder off.

Selecting the storage media

1. Press the **MENU** button.
   - The menu list will appear.
2. Press the **Control** button (◀ / ▶) to select "**Settings.**"
3. Press the **Control** button (▲ / ▼) to select **"Storage Type"**, then press the **OK** button.
4. Press the **Control** button (▲ / ▼) to select **"Memory"** or **"Card"**, then press the **OK** button.
   - **"Memory"**: When using the built-in memory.
   - **"Card"**: When using a memory card.
5. Press the **MENU** button to exit.



Using the built-in memory (SMX-K44/K45 only)

- Because this camcorder has an embedded 16GB (SMX-K44 only), 32GB (SMX-K45 only) memory, it is not necessary to buy extra storage media.

Using a memory card (not supplied)

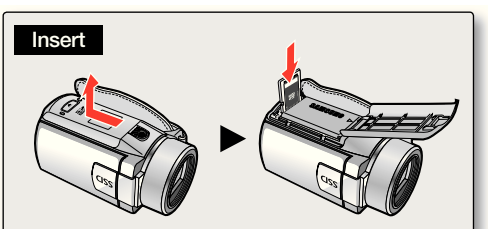
- This camcorder has a card slot for access to SDHC (Secure Digital High Capacity).
- You can use SDHC cards on your camcorder.
  - Some cards are not compatible depending on a memory card manufacturer and memory card type.

- Never format the built-in memory or memory card using a PC.
- If you insert a memory card when the camcorder is on, the pop-up message will prompt you automatically to select the storage type. (SMX-K44/K45 only)
- If there is no memory card inserted, only the built-in memory will be available. (SMX-K44/K45 only)
- Do not eject a memory card while it is being used in the camcorder. A memory card and its data may be damaged.
- Do not remove the power (battery pack or AC power adaptor) when accessing storage media with recording, playback, format, delete, etc. The storage media and its data may be damaged.

INSERTING / EJECTING A MEMORY CARD

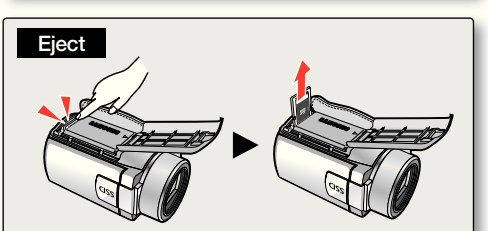
Inserting a memory card

1. Turn the camcorder off.
2. Slide and open the battery/memory card cover as shown in the figure.
3. Insert a memory card into the memory card slot until it softly clicks in the direction of the arrow shown in the figure.
4. Close the cover.



Ejecting a memory card

1. Turn the camcorder off.
2. Slide and open the battery/memory card cover as shown in the figure.
3. Slightly push the memory card inwards to pop it out.
4. Pull the memory card out of the memory card slot and close the cover.



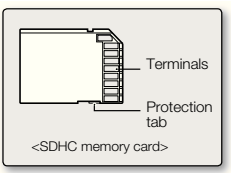
CAUTION As shown in the figure, be sure to slide the memory card inwards with the label facing the battery.

about the storage media

SELECTING A SUITABLE MEMORY CARD

A memory card is a compact portable storage media.

- **You can use an SDHC memory card.**
  (Memory cards must be purchased separately.)
  - You can also use an SD memory card, but recommended that you use an SDHC memory card with your camcorder. (SD cards up to 2GB are supported with this camcorder. Normal operation is not guaranteed with SD cards bigger than 2GB.)
- **In this camcorder, you can use memory cards (SD/SDHC) of the following capacity: SD: 512MB~2GB, SDHC: 4~32GB**
- **Compatible recording media**
  - The following recording media have been recommended for use with this camcorder. Others are not recommended, so buy such products with caution.
    SDHC or SD memory cards: By Panasonic, SanDisk, and TOSHIBA
- If other media are used, they may fail to record data correctly, or they may lose data that has already been recorded.
- For video recording, use a memory card that supports faster write speed (at least 2MB/sec).



<Usable Memory Card>
(512MB ~32GB)

SDHC (Secure Digital High Capacity) Memory Card

- The SDHC card is a higher version (Ver.2.00) SD card and supports capacity above 2GB.
- An SDHC card has a mechanical write protection switch. Setting the switch prevents accidental erasure of files recorded on the card. To enable writing, move the switch up towards terminals. To set write protection, move the switch down.
- Due to changes In File Allocation System and physical specifications, SDHC memory cards can not be used with current SD enabled host devices. SDHC memory cards can only be used with only SDHC enabled host devices.

Cautions for memory card

- Damaged data may not be recovered. It is recommended you make a back-up of important data on the hard disk of your PC.
- Turning the power off or removing a memory card during operations such as formatting, deleting, recording, and playback may cause data loss.
- After you modify the name of a file or folder stored in a memory card using your PC, your camcorder may not recognize the modified file.

Handling a memory card

- It is recommended that you power off before inserting or removing a memory card to avoid data loss.
- It is not guaranteed that you can use a memory card formatted by other devices. Be sure to format your memory card using this camcorder.
- You have to format newly-purchased memory cards, memory cards with data that your camcorder cannot recognize or are saved by other devices. Note that formatting erases all data on a memory card.
- If you cannot use a memory card that has been used with another device, format it with your camcorder. Note that formatting erases all information on a memory card.
- A memory card has a certain life span. If you cannot record new data, you have to purchase a new memory card.
- A memory card is a precision electronic media. Do not bend, drop, or cause strong impact to the card.
- Do not use or store at high temperatures, in humidity or a dusty environment.
- Do not bring foreign substances on memory card terminals. Use a soft, dry cloth to clean the terminals if required.
- Do not paste anything other than the label supplied with the card on the label pasting portion.
- Be careful to keep a memory card out of the reach of children, who might swallow it.

The camcorder supports SDHC memory card for data storage.

- The data storage speed may differ, depending on the manufacturer and production system.
- Using a lower write speed memory card when recording a video may cause problems when storing the video on a memory card. You may even lose your video data during the recording.
- In an attempt to preserve every bit of the recorded video, the camcorder forcibly stores the video on a memory card and displays a warning: **"Low speed card. Please record a lower resolution."**

To facilitate video recording, you are recommended to use a memory card that supports faster write speed.

- If you are forced to use a low speed memory card, resolution of the recording may be lower than the set value. However, the higher the resolution, the more memory will be used.
- For optimal performance of the camcorder, ensure that you purchase a fast speed memory card.

Actual formatted capacity may be less as the internal firmware uses a portion of the memory.

- Samsung is not responsible for data loss due to misuse.
- We recommend using a memory card case to avoid losing data from moving and static electricity.
- After a period of use, a memory card may get warm. This is normal and is not a malfunction.

about the storage media

RECORDABLE TIME AND CAPACITY

- The following shows the camcorder's maximum recording time and number of images according to the resolution / memory capacity.
- For recording videos and photos, please note the approximate maximum limits.

Recordable time for videos

Media		Built-in memory*		Memory Card					
Capacity		16GB	32GB	1GB	2GB	4GB	8GB	16GB	32GB
TV Super Fine (SF)	720x480(60i)	380min.	760min.	23min.	47min.	95min.	190min.	380min.	760min.
TV Fine (F)	720x480(60i)	480min.	960min.	30min.	60min.	120min.	240min.	480min.	960min.
TV Normal (N)	720x480(60i)	620min.	1,240min.	38min.	77min.	155min.	310min.	620min.	1,240min.
Web Fine (F)	640x480(30p)	480min.	960min.	30min.	60min.	120min.	240min.	480min.	960min.
Web Normal (N)	640x480(30p)	620min.	1,240min.	38min.	77min.	155min.	310min.	620min.	1,240min.

(Unit: Approximate minutes of recording)

Recordable number of photos

Media		Built-in memory*		Memory Card					
Capacity		16GB	32GB	1GB	2GB	4GB	8GB	16GB	32GB
Mode	Resolution								
4:3	800x600	9,999	9,999	1,920	3,840	7,680	9,999	9,999	9,999
	1600x1200	9,999	9,999	760	1,530	3,040	6,080	9,999	9,999
16:9	848x480	9,999	9,999	1,920	3,840	7,680	9,999	9,999	9,999
	1696x960	9,999	9,999	760	1,530	3,040	6,080	9,999	9,999

(Unit: Approximate number of images)

1GB ≒ 1,000,000,000 bytes : actual formatted capacity may be less as the internal firmware uses a portion of the memory.

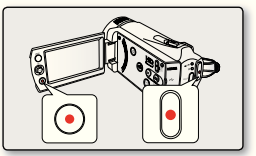
- The previous figures are measured under Samsung's standard recording test conditions and may differ depending on the test or use condition.
- The camcorder provides five resolution options for video recordings:
  - **"TV Super Fine", "TV Fine", "TV Normal", "Web Fine", "Web Normal."**
  - **"TV Super Fine", "TV Fine"** and **"TV Normal"** modes provide optimal operation with a TV.
    "Web Fine" and **"Web Normal"** modes provide optimal operation with web-based applications.
- The compression rate increases while lowering the resolution (in the order of **"TV Super Fine", "TV Fine", "TV Normal", "Web Fine", "Web Normal"**). The higher the compression rate is, the lower the resolution is, but the recording time will be increased.
- The recording length of a Time Lapse REC may vary depending on settings.
- The compression rate automatically adjusts to the recording image, and the recording time may vary accordingly.
- You can use an SDHC memory card on your camcorder.
  Some cards may not be compatible depending on a memory card manufacturer and memory card type.
- Proper operation is not guaranteed for those memory cards that are not formatted by this camcorder.
  Perform the formatting directly on the camcorder.
- To facilitate video recording, it is recommended to use a memory card that supports faster write speed.
  (Write speed: 2MB / sec or higher) If you use a low write speed memory card, recording may stop with a message of **"Low speed card. Please record a lower resolution."**
- The camcorder will operate properly with memory cards up to 32GB for recording / playback.
  Memory cards bigger than **32GB** in capacity may not work properly.
- A memory card that is used to store a video can cause unwritable areas, which may result in reduced recording time and free memory space.
- The maximum size of a video (H.264/AVC) file that can be recorded at one time is 1.8GB.
- The camcorder can store up to 9,999 files of videos and photos in one memory card.
- Video (or photo) images recorded by other equipment are not playable on this camcorder.
- Items marked with * are available only with 16GB (SMX-K44 only), 32GB (SMX-K45 only) models.
- For recording, 16:9 aspect ratio will use more memory than 4:3 aspect ratio. You can select the desired LCD display aspect ratio for recording or playback (16:9 Wide/4:3 aspect ratio). ➥page 56

recording

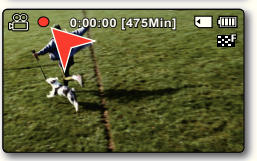
Basic procedures to record a video or photo image are described below and on the following pages.

RECORDING VIDEOS

- The camcorder provides two **Recording start/stop** buttons. One is on the rear side of the camcorder and the other one is on the LCD panel. Select the one that works best for you.



1. Open the LCD screen to turn on the camcorder.
   - You can also turn the camcorder on by pressing the **Power** (⏻) button.
   - Connect a power source to the camcorder. ➥page 16
     (A battery pack or an AC power adaptor)
   - Set the appropriate storage media. ➥page 36 (SMX-K44/K45 only)
     (If you want to record on a memory card, insert a memory card.)
   - If required, change the video resolution and aspect ratio at your preference.
2. Check the subject on the LCD screen.
3. Press the **Recording start/stop** button.
   - The recording indicator (●) will display and recording will start.
   - To stop recording, press the **Recording start/stop** button again.
4. When recording is finished, turn the camcorder off.



Quick View

Using the Quick View function, you can view the most recently recorded video or photo image right after your recording.

1. Press the **OK** button in STBY mode right after your recording.
   - Shortcut menu (OK guide) is displayed on the LCD screen.
2. Press the **Control** button (▶) to view the most recent video (or photo) you have recorded.
   - After the Quick view is finished, your camcorder switches back to the STBY mode.
   - During a Quick view, use the **Control** buttons (▲ /◀ / ▶/**OK**) for playback search or deleting the current file.

The Quick View function is not available in the following conditions:

- If the mode has been changed after the recording or the camcorder is connected USB cable.
- If the camcorder has been turned off and on again after the recording.

WARNING

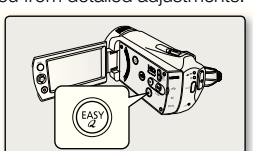
- Samsung is not responsible for any loss or damages due to the memory card problem such as saving failures and abnormal playbacks.
- Beware that you can not recover a damaged recorded data.
- Do not disconnect the power source (battery pack, AC adaptor) during a recording. Otherwise, it may cause damage to the storage media or data corruption.

- For on-screen information display. ➥page 25
- Eject the battery pack when you have finished recording to prevent unnecessary battery power consumption.
- For various functions available when you record videos. ➥pages 53~68
- During recording, some button operations are unavailable. (**MODE** button, **MENU** button, etc.)

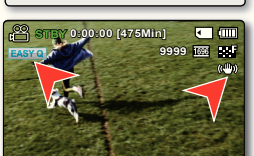
- Sound is recorded from the internal stereo microphone on the front of the camcorder. Take care that this microphone is not blocked.
- Before recording an important video, make sure to test the recording function to check if there is any problem with the audio and video recording.
- Do not operate the **Power** (⏻) button or remove a memory card while accessing the storage media. Doing so may damage the storage media or the data on the storage media.
- LCD screen brightness and color can be adjusted from the menu. Adjusting the brightness or color of the LCD screen does not affect the image to be recorded. ➥page 89
- **This camcorder provides one combined video and photo record mode. You can easily record videos or photos in the same mode without having to change it.**
- You cannot use a locked memory card for recording. You will see a message saying recording is disabled due to the lock.
- You can switch the play mode to the record mode by pressing the **Recording start/stop** or **MODE** button.
- If the power cable/battery is disconnected or recording is disabled during recording, the system is switched to the data recovery mode. While data is being recovered, no other function is enabled. After data recovery, the system will be switched to the STBY mode. When the recording time is short, the data recovery might fail.

RECORDING WITH EASE FOR BEGINNERS (EASY Q MODE)

With the EASY Q function, most of the camcorder settings are automatically adjusted, which frees you from detailed adjustments.



1. Open the LCD screen to turn on the camcorder.
   - You can also turn the camcorder on by pressing the **Power** (⏻) button.
2. Press the **EASY Q** button.
   - When you press the **EASY Q** button, most functions turn off and the following functions are set to **"Auto."** (Focus, iSCENE, etc.)
   - The EASY Q ([EASY Q]) and Anti-Shake (OIS) ( ) indicators appear on the screen at the same time.
3. To record videos, press the **Recording start/stop** button.
   - To take photos, press the **PHOTO** button.
   - Recording will begin using the basic automatic settings.



To cancel EASY Q mode

Press the **EASY Q** button again.

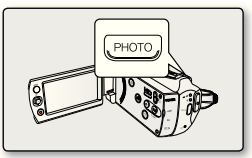
- The EASY Q ([EASY Q]) and Anti-Shake (OIS) ( ) indicators disappear from the screen.
- Most settings will return to the settings that were set prior to activating the EASY Q mode.

Unavailable buttons during EASY Q operation:

- The following button and menu operations are unavailable because the items are automatically set. The corresponding message **"Release the EASY Q"** may appear if unavailable operations are attempted.
  - **MENU** button / **OK** button
- Cancel the EASY Q function if you want to add any effect or settings to the images.
- During recording, you cannot set or release the EASY Q mode.

TAKING PHOTOS

- You can take photos with the **PHOTO** button.

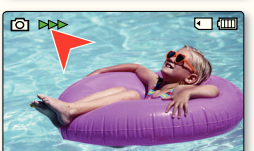


1. Open the LCD screen to turn on the camcorder.
   - You can also turn the camcorder on by pressing the **Power** (⏻) button.
   - Set the appropriate storage media. ➥page 36 (SMX-K44/K45 only)
     (If you want to record on a memory card, insert a memory card.)
   - If required, change the photo resolution at your preference.

2. Check the subject on the LCD screen.

3. Press the **PHOTO** button.
   - Shutter sound is heard.
     Indicators (📷 ▶▶▶) on the screen disappear, and the photo image is recorded.
   - While saving a photo image to the storage media, you cannot take the next photo.

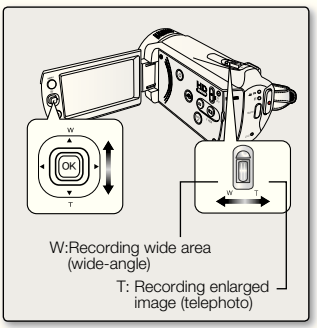
4. When taking a photo is finished, turn the camcorder off.



- Maximum number of recordable images may vary depending on the subject and resolution setup.
- Audio will not be recorded with the photo image on the storage media.
- If the focus is not clear enough, adjust it manually.
- LCD screen brightness and color can be adjusted from the menu. Adjusting the brightness or color of the LCD screen does not affect the image to be recorded. ➥page 89
- Do not turn off the camcorder or remove a memory card when taking photos as it may damage the storage media or data.
- Photo image files recorded by your camcorder conform to the “DCF (Design rule for Camera File system)” universal standard established by the JEITA (Japan Electronics and Information Technology Industries Association).
- DCF is an integrated image-file format for digital cameras: Image files can be used on all digital devices conforming to DCF.
- Available photo resolutions are 1696X960 and 848X480 in 16:9 aspect ratio, while 1600X1200 and 800X600 are available in 4:3 aspect ratio. (To switch to 4:3, release 16:9 mode.) ➥page 56
- **This camcorder provides one combined video and photo record mode. You can easily record videos or photos in the same mode without having to change it.**
- You can switch the play mode to the record mode by pressing the **PHOTO** or **MODE** button.
- Using the Quick View function, you can view the most recently recorded video or photo image right after your recording. ➥page 42

ZOOMING IN AND OUT

Use the zoom function for close-up or wide-angle recording. This camcorder allows you to record using 52x optical power zoom, 65x Intelli-zoom and 2200x digital zoom.

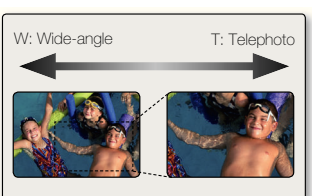


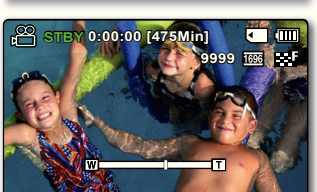
To zoom in

- Slide the Zoom lever towards **T** (telephoto).
  (Or press the **Control** button (▼) on the LCD panel.)

To zoom out

- Slide the Zoom lever towards **W** (wide-angle).
  (Or press the **Control** button (▲) on the LCD panel.)





- You can zoom with the zoom lever or the **Control** (W/T) button on the LCD panel.
- Zoom magnification over 65x is done through digital image processing, and is therefore called digital zoom. Digital zooming is possible up to 2200x.
  Set **"Zoom Type"** to **"Digital Zoom."** ➥page 65
- The minimum possible distance between the camcorder and subject while maintaining sharp focus is about 1cm (about 0.39 inch) for wide-angle and 1m (about 39.4 inches) for telephoto.
- Optical zoom preserves image quality, but during digital zoom the image quality may suffer.
- Fast zooming or zooming in subject at a far distance may produce slow focusing. If this occurs, use **"Manual Focus."** ➥page 62
- It is recommended to use Anti-Shake (OIS) with handheld recording if the subject is zoomed in and enlarged.
- Frequent use of the zoom function consumes more power.
- Zooming during a recording may record operation sound of the zoom lever or zoom button.
- When using the zoom function, its speed can be decreased by slowly moving the Zoom (W/T) lever. A fast moving increases the zoom speed. However, the Zoom (W/T) button on the display cannot adjust the zoom speed.

playback

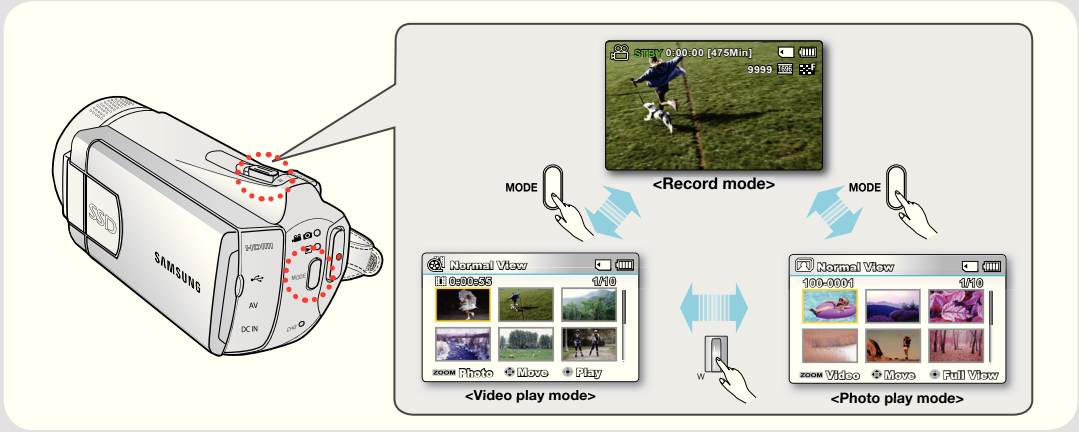
- You can view recorded videos and photos in thumbnail index view and play them in various ways.
  In the thumbnail index view, you can directly select and display a desired image without using fast forwarding and rewinding.
- **This camcorder provides one combined video and photo record mode. You can easily record videos or photos in the same mode without having to change it.**

CHANGING THE PLAYBACK MODE

- Pressing the **MODE** button changes the operation mode to Record (🎥/📷) and Play (▶) mode in turn.
- The recorded videos or photos are displayed in thumbnail index view. According to the previous record mode, recordings will be stored in videos or photos thumbnail index view, respectively. When switching to Play mode after recording a video, the videos thumbnail index view appears. When switching to Play mode after recording a photo, the photos thumbnail index view appears.

How to change between video and photo thumbnail view.

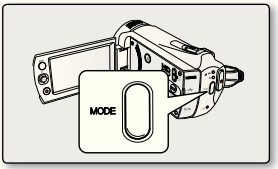
- You can simply switch between video and photo thumbnail view using the zoom lever.



The Multi View Option enables you to sort thumbnails of recorded videos or photos in the order of recording, recorded date, and the iSCENE mode for playback. ➥page 70

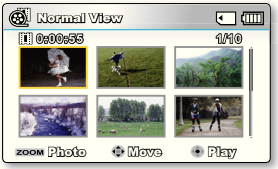
PLAYING VIDEOS

- This function works only in Video Play (🎞) mode.
- You can find a desired video image quickly using the thumbnail index view.



1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
- Set the appropriate storage media. (SMX-K44/K45 only) ➥page 36
  (If you want to playback images on a memory card, insert a memory card.)

2. Press the **MODE** button to select the Play mode.
- The thumbnail index view appears. The thumbnail highlight is on the latest created or played file.
- Playing time of the selected file and the thumbnail showing the video playback will appear on the screen.



3. Select the Video thumbnail index view screen.
- You can simply switch between video and photo thumbnail view using the zoom lever.

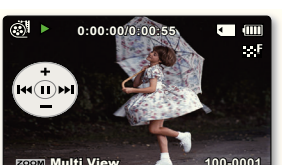
4. Use the **Control** button (▲ / ▼ / ◀ / ▶) to select the desired videos, and then press the **OK** button.
- If you set the Date/Time Display before video playback, date/time appears briefly for about a second and then the selected video starts playing.
- Shortcut menu for playback will be displayed for a while.
- The selected videos are played according to the Play Option setting. ➥page 71
- To stop playback and return to the thumbnail index view, move the zoom lever.

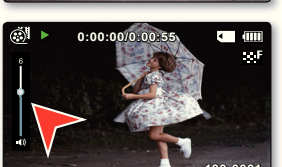
- If there is no file stored to view, the message **"Empty"** appears.
- Video files may not playback on the camcorder in the following cases:
  - Video files edited or renamed on a PC
  - Video files recorded by devices other than the camcorder
  - Video file formats that are not supported
- The built-in speaker automatically turns off when the Audio/Video cable is connected to the camcorder. (When connected to external devices, volume adjustment should be done on the connected external device.)
- You can playback recorded video files on a TV or a PC. ➥pages 95,100
- You can upload recorded videos or photos to YouTube or Flickr using Intelli-studio. ➥page 105
- For various functions available during playback, see "playback options." ➥pages 69~81
- Use the Quick View function if you want to preview the last recorded video or photos. ➥page 42

Adjusting the volume

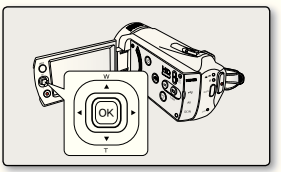
Press the **Control** button (▲ / ▼) to increase or decrease the volume.

- The volume bar disappears after 3~4 seconds.
- You can hear the recorded sound from the built-in speaker.
- The level can be set to anywhere between 0 and 10.
  (If you close the LCD screen while playing, you will not hear the sound from the speaker.)





Various Playback Operations



Still playback (pause) (▶/ ❚❚)

- Press the **OK** button during playback.
  - To resume normal playback, press the **OK** button again.

Search playback (◀◀ / ▶▶)

- During playback, press and hold the **Control** button (▶) for forward search, or to the left for reverse search.
- Pressing the **Control** button to (◀ / ▶) repeatedly increases the search speed for each direction.
  - RPS (Reverse Playback Search) rate: x2→x4→x8→x16
  - FPS (Forward Playback Search) rate: x2→x4→x8→x16
- To resume normal playback, press the **OK** button.

Skip playback (⏮ /⏭)

- During playback, press the **Control** button (▶) to locate the start point of the next file. Pressing the **Control** button (▶) repeatedly skips files in the forward direction.
- During playback, press the **Control** button (◀) to locate the start point of the current file. Pressing the **Control** button (◀) repeatedly skips files in the reverse direction.
- Press the **Control** button (◀) within 3 seconds from the start point, and the first image of the previous file is skipped.

Frame-by-frame playback (◀❚❚ / ❚❚▶)

- In pause mode, use the **Control** button (◀ / ▶) to play the video forward or backward one frame at a time.
  - To resume normal playback, press the **OK** button.

Slow motion playback (◀❚ / ❚▶)

- During pause, holding the **Control** button (◀ / ▶) reduces the playback speed.
- During slow motion playback, pressing the **Control** button (◀ / ▶) changes the playback speed.
  - Forward slow playback rate: x1/2 → x1/4 → x1/8 → x1/16
  - Reverse slow playback rate: x1/2 → x1/4 → x1/8 → x1/16
  - To resume normal playback, press the **OK** button.
- Recorded sound is not heard in slow motion playback.

VIEWING PHOTOS

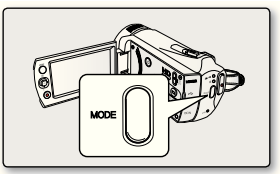
- This function works only in Photo Play (▣) mode.
- You can find and view desired photos quickly using the thumbnail index view.

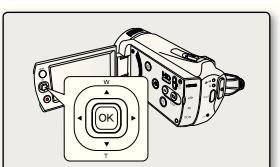
1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
- Set the appropriate storage media. (SMX-K44/K45 only) ➥page 36
  (If you want to playback images on a memory card, insert a memory card.)

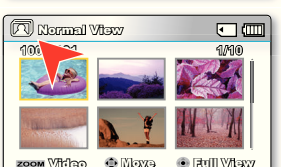
2. Press the **MODE** button to select the Play mode.
- The thumbnail index view appears. The thumbnail highlight is on the latest created or played file.

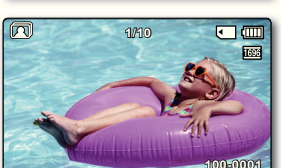
3. Select the Photo thumbnail index view screen.
- You can simply switch between video and photo thumbnail view using the zoom lever.

4. Use the **Control** button (▲ / ▼ / ◀ / ▶) to select the desired photos, and then press the **OK** button.
- Shortcut menu for playback will be displayed for a while.
- To view the previous/next photo, press the **Control** button (◀ / ▶).
- To return to the thumbnail index view, move the zoom lever.







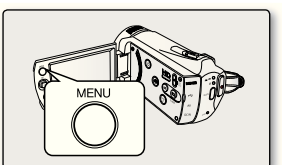


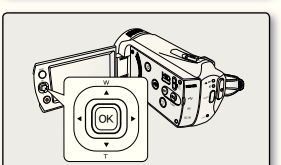
WARNING
- Do not power off or eject a memory card during photo playback. Doing so may damage the recorded data.
- Your camcorder may not playback the following photo files normally;
  - A photo with its file name changed on a PC.
  - A photo recorded on other devices.
  - A photo with a file format not supported on this camcorder (does not conform to DCF standards).

- Loading time may vary depending on the size and quality of the selected photo.
- The Quick View function is used if you want to preview the last recorded photos. ➥page 42

CHANGING THE MENU SETTINGS

You can change the menu settings to customise your camcorder. Access the desired menu screen by following the steps below, then change the various settings.





1. Open the LCD screen to turn on the camcorder.
   - You can also turn the camcorder on by pressing the **Power** (⏻) button.
2. Press the **MENU** button.
   - The menu screen appears.
3. Select the desired submenu and menu item with the **Control** buttons (▲ / ▼ / ◀ / ▶) and the **OK** button.
   - To return to the normal screen, press the **MENU** button.
   - Depending on the mode selected, some menu items may not be available to select and change.

You can also access the shortcut menu using the **OK** button. ➥page 32

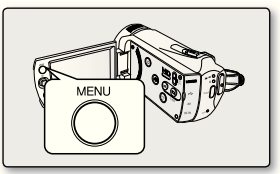
Button Tips

a. **MENU** button : Use it to enter or exit the menu.
b. **Control** button (▲ / ▼ / ◀ / ▶) : Use it to move up/down/left/right
c. **OK** button : Use it to select or confirm the menu.

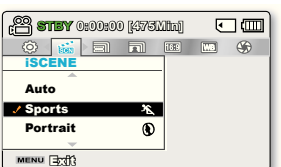
recording options

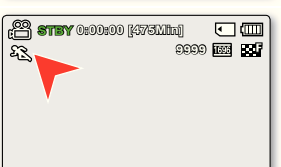
✪ **Follow the instructions below to use each of the menu items listed after this page**.

For example: Setting iSCENE in the Record mode.



1. Open the LCD screen to turn on the camcorder.
   - You can also turn the camcorder on by pressing the **Power** (⏻) button.
2. Press the **MENU** button.
   - The menu screen appears.
3. Press the **Control** button (◀ / ▶) to select **"iSCENE."**
4. Select the desired submenu item with the **Control** button (▲ / ▼), and then press the **OK** button.
5. Press the **MENU** button to exit the menu.





The selected item is applied and the indicator is displayed.
However, if **"Auto"** is selected in the iSCENE mode, the item's indicator may not be displayed on the screen. (iSCENE, Back Light, Focus, etc.)

MENU ITEMS

- Accessing items in the menu depends on the operation mode.
- For operation details, see the corresponding page. ➥pages 54~68

Recording menu items

● : Possible

Items	Record (🎥/📷) mode	Default value	Page
iSCENE	●	Auto	54
Video Resolution	●	TV Fine	55
Photo Resolution	●	1696x960 (16:9 Wide)	55
16:9 Wide	●	On	56
White Balance	●	Auto	56
Aperture	●	Auto	57
Shutter Speed	●	Auto	58
EV	●	0	59
C.Nite	●	Off	60
Back Light	●	Off	60
Focus	●	Auto	61
Digital Effect	●	Off	63
Fader	●	Off	64
Wind Cut	●	Off	64
Zoom Type	●	Intelli-Zoom	65
Time Lapse REC	●	Off	66
Guideline	●	Off	68
Settings	●	-	82

recording options

USING THE RECORDING MENU ITEMS

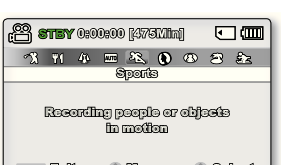
You can the menu items for video or photos recording.

iSCENE

This camcorder automatically sets the shutter speed and aperture according to the subject brightness for optimum recording: You can also specify one of various modes depending on subject conditions, recording environment or purpose of filming.

item	contents	on-screen display
"Auto"	- You can shoot images in Auto adjustment mode.	None
"Sports"	- Reduces blurring when recording rapidly moving subjects such as in golf or tennis. If the Sports mode is used under a fluorescent light, the image may flicker. In this case, use the Auto mode for recording.	
"Portrait"	- Creates a shallow depth of field so that the person or subject appears against a softened background. - The portrait mode is most effective when used outdoors. - EV value is automatically adjusted to the optimal.	
"Spotlight"	- Prevents overexposure of subject's face, etc. when strong light strikes the subject, as in a wedding or on stage.	
"Beach"	- Where sunlight is intense like a beach.	
"Snow"	- Where reflection of light is intense like a snowfield.	
"High Speed"	- Reduces blurring objects in rapid motion.	
"Food"	- Recording close-up objects in high saturation.	
"Waterfall"	- Recording a waterfall or fountain.	

- You can check the selected iSCENE on the on-screen information display. However, nothing will appear in **"Auto"** mode.
- The iSCENE also can be set in the shortcut menu. ➥page 32



Video Resolution

You can select the resolution of a video to be recorded. This camcorder can record in **"TV Super Fine"**, **"TV Fine"**, **"TV Normal"**, **"Web Fine"** and **"Web Normal"** modes. The **"TV Fine"** mode is set as the factory default.

item	contents	on-screen display
"TV Super Fine"	Videos recorded in 720x480(60i) resolution at super-fine image quality.	
"TV Fine"	Videos recorded in 720x480(60i) resolution at fine image quality.	
"TV Normal"	Videos recorded in 720x480(60i) resolution at normal image quality.	
"Web Fine"	Videos recorded in 640x480 (30p) resolution at fine image quality. Supports viewing with the optimal resolution on a PC.	
"Web Normal"	Videos recorded in the 640x480 (30p) resolution at normal image quality. Supports viewing with the optimal resolution on a PC.	

- You can record a scene at five resolution levels: **"TV Super Fine", "TV Fine", "TV Normal", "Web Fine"** or **"Web Normal."** However, the better the resolution is, the more memory is used.
- The recording times depend on the resolution of a video to be recorded. ➥page 40
- Video resolution settings of **"Web Fine"** and **"Web Normal"** record movie in 4:3 aspect ratio even when you set it to 16:9.

Photo Resolution

You can select the resolution of the photo image to be recorded. For detailed information image capacity. ➥page 45

item	contents	on-screen display
"1696x960 (16:9)"	Records in 1696x960 resolution.	
"848x480 (16:9)"	Records in 848x480 resolution.	
"1600x1200 (4:3)"	Records in 1600x1200 resolution.	
"800x600 (4:3)"	Records in 800x600 resolution.	

- Photos recorded by your camcorder may not be displayed in another device if it does not support the high resolution.
- For photo development, the higher the resolution, the finer the image quality.
- The number of recordable images varies depending on the recording environment. ➥page 40
- High resolution images occupy more memory space than low resolution images. If a higher resolution is selected, there is less space to store photos in the memory.
- The submenu items of Photo Resolution vary depending on the selection of the 16:9 Wide function.

16:9 Wide

You can select the desired LCD display aspect ratio for recording or playback (16:9 Wide/4:3 aspect ratio).

item	contents	on-screen display
"Off"	Disables the function. Displays the image in 4:3 aspect ratio. Select to use the standard display aspect ratio of 4:3 on the screen.	None
"On"	Recording and viewing of 16:9 aspect ratio.	None

- Please set the aspect ratio before recording. The default setting is **"16:9 Wide : On."**
- If you record videos in 4:3 mode, then connect the camcorder to an HDTV via HDMI, your videos will play back in 16:9 mode.
- Video resolution settings of **"Web Fine"** and **"Web Normal"** record movie in 4:3 aspect ratio even when you set it to 16:9.

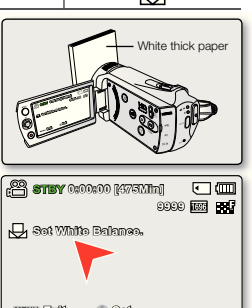
White Balance

This memory camcorder automatically adjusts the color of subject. Change the white balance setting depending on the recording conditions.

item	contents	on-screen display
"Auto"	Adjusts the White Balance automatically.	None
"Daylight"	Controls the white balance according to the outdoor lighting.	
"Cloudy"	Adjusts for a cloudy sky or shady location.	
"Fluorescent "	Adjusts for white fluorescent lighting.	
"Tungsten"	Adjusts for places under incandescent lamp, or under bright lighting, such as in a photo studio.	
"Custom WB"	Adjusts White Balance manually to match the light source or situation.	

Setting the white balance manually :

1. Select **"Custom WB".**
   - The indicator ( ) and the message **"Set White Balance."** are displayed.
2. Frame a white object such as a piece of paper so that it fills the screen.
   Use an object that is not transparent.
   - If the object that fills the screen is not focused, correct the focus using **"Manual Focus."** ➥page 62
3. Press the **OK** button.
   - The white balance setting will be applied and indicator ( ) is displayed.



- A subject can be recorded under various types of lighting conditions indoors (natural, fluorescent, candlelight, etc.). Because the color temperature is different depending on the light source, the subject tint will differ depending on the white balance settings. Use this function for a more natural result.
- Reset the white balance if lighting conditions change.
- During normal outdoor recording, setting to auto may provide better results.
- Do not use a colored object when setting white balance: The appropriate tint cannot be set.

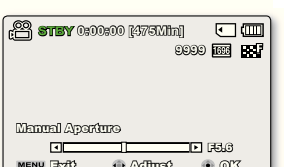
Aperture

The camcorder adjusts the aperture automatically depending on the subject and recording conditions.
You can also manually adjust the Aperture to your preference.

item	contents	on-screen display
"Auto"	Sets the aperture value automatically.	None
"Manual"	Sets the aperture value manually.	Fx.x

Setting the aperture manually:

- Press the **Control** button (◀ / ▶) to adjust the aperture while viewing the image on the LCD screen.
  - Confirm your selection by pressing the **OK** button.
  - Exposure value can be set between **"F1.8"** and **"F22."**
  - If you set aperture to manual, the higher the aperture, the brighter the recorded picture will be.



Understanding Aperture

The aperture stop of a photographic lens can be adjusted to control the amount of light reaching the image sensor. The aperture value needs to be adjusted in the following cases:

- When shooting against the light or when the background is too bright.
- When shooting on a reflective natural background such as at the beach or when skiing.
- When the background is overly dark (for example, night scenery).

Shutter Speed

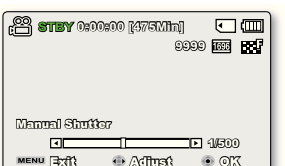
The memory camcorder automatically sets the shutter speed depending on the subject brightness.
You can also manually adjust the shutter speed according to the scene conditions.

item	contents	on-screen display
"Auto"	The memory camcorder automatically sets the appropriate aperture value.	None
"Manual"	Shutter speed can be set to 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, or 1/10000.	M 1/XXX

Setting the shutter speed manually:

You can set the shutter speed manually. A fast shutter speed can freeze the motion of a fast moving subject and a slow shutter speed can blur the subject to give the impression of motion. The adjusted value is applied right after moving the **Control** button (◀ / ▶) to adjust the shutter speed.

- Press the **Control** button (◀ / ▶) to adjust shutter speed, then press the **OK** button.
  - The adjusted value is applied right after pressing the **Control** button (◀ / ▶) to adjust the shutter speed.



Recommended shutter speed when recording:

shutter speed	conditions
1/60	The shutter speed is fixed at 1/60 second. Black bands that usually appear when shooting a TV screen become narrower.
1/100	The shutter speed is fixed at 1/100 second. Indoor sports such as basketball. The flickering that occurs when shooting under a florescent light or mercury-vapor lamp is reduced.
1/250, 1/500, 1/1000	Moving cars, trains or other rapidly moving vehicles such as roller coasters.
1/2000, 1/4000, 1/10000	Outdoor sports such as golf and tennis.

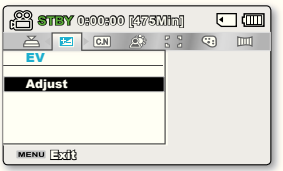
CAUTION

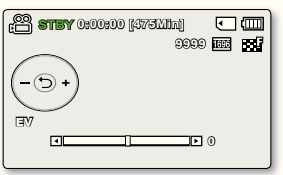
- Do not shoot the sun while the shutter speed is set to 1/1000 or slower.
- Slow shutter speed exposes the sensor to more lights, which may deteriorate the product.

- The image may not seem smooth when a high shutter speed is setted.
- When recording with a shutter speed of 1/1000 or higher, make sure the sun is not directly shining into the lens.
- Shutter speed 1/100 seconds means the shutter box is opened for 1/100 seconds.
- Faster shutter speed is recommended for shooting a dynamic subject. Note that higher shutter speed produces darker image. As the shutter speed increases, the sensor accepts less light than a slower shutter speed setup.

EV (Exposure Value)

The camcorder usually adjusts the exposure automatically.
You can also manually adjust the exposure depending on the recording conditions.





Setting the exposure manually:

When manually setting the exposure, the default setting appears as the value is automatically adjusted according to the environmental light conditions.

- Press the **Control** button (◀ / ▶) to adjust the exposure while viewing the image on the LCD screen.
  - Confirm your selection by pressing the **OK** button.
  - Exposure value can be set between **"-2.0"** and **"+2.0"**
  - If you set exposure to manual, the higher the exposure, the brighter the recorded picture will be.
  - Exposure value setting will be applied and (± XX) indicator and setting value are displayed.

Manual exposure is recommended in situations:

- When shooting using reverse lighting or when the background is too bright.
- When shooting against a reflective natural background such as at the beach or when skiing.
- When the background is overly dark or the subject is bright.

- The exposure also can be set in the shortcut menu. ➥page 32
- The shutter speed also varies automatically depending on the EV value.

recording options

C.Nite

You can adjust the shutter speed when recording a slow moving object, or record a brighter image in dark places without a compromise in colors.

item	contents	on-screen display
"Off"	Disables the function.	None
"Auto"	The memory camcorder automatically adjusts image brightness.	C.N AUTO
"1/30"	Record a brighter image by extending the low shutter speed range to **"1/30"**.	C.N 1/30
"1/15"	Record a brighter image by fixing the shutter speed to **"1/15"** in a dark location.	C.N 1/15

- When using the C.Nite, the image takes on a slow motion like effect.
- When using the C.Nite, the focus adjusts slowly and white dots may appear on the screen, this is not a defect.

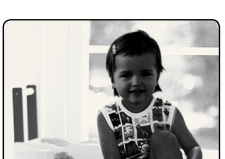
Back Light

When a subject is lit from behind, this function will compensate for lighting so that the subject is not too dark.

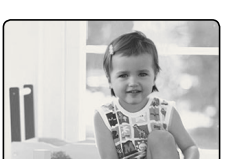
item	contents	on-screen display
"Off"	Disables the function.	None
"On"	Backlight compensation brightens the subject quickly.	

Back lighting influences recording when the subject is darker than the background:

- The subject is in front of a window.
- The subject is against a snowy background.
- The subject is outdoors and the background is overcast.
- The light sources are too bright.
- The person to be recorded is wearing white or shiny clothes and is placed against a bright background:
  The person's face is too dark to distinguish his/her features.



<Backlight off>



<Backlight on>

Focus

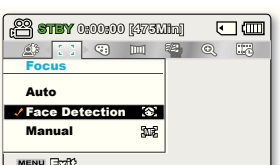
- The camcorder usually focuses on a subject automatically (auto-focus).
- You can also manually focus on a subject depending on the recording conditions.

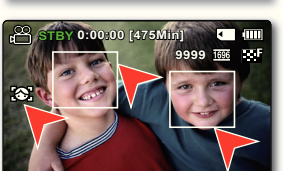
item	contents	on-screen display
"Auto"	In most situations, it is better to use the automatic focus feature, as it enables you to concentrate on the creative side of your recording.	None
"Face Detection"	Records under the optimal condition by detecting faces automatically.	
"Manual"	Manual focusing may be necessary under certain conditions that make automatic focusing difficult or unreliable.	

Face detection

It detects and recognizes face-like shapes and adjusts focus, color and exposure automatically. Also, it adjusts recording conditions optimised for the face detected.

- Press the **Control** button (▲ / ▼) to select **"Face Detection"**, and then press the **OK** button.
  - Detects a face and shows a frame on it. The detected face image is optimised automatically.



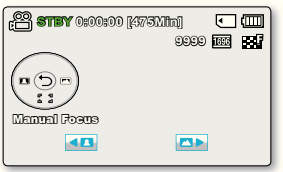


- The Face Detection indicator ( ) and Face Detection frame ( ) are not recorded.
- Framing a person's face while Face Detection is set will adjust focus and exposure to optimal values automatically.
- The Face Detection may not operate depending on the recording conditions. For example, the Face Detection frame may appear when framing a 'face-like' shape, even when the subject is not a person's face. If this occurs, turn off the Face Detection feature.
- The Face Detection feature will not work when framing the side of a person's face. You must be facing them 'head-on.'

recording options

Focusing manually during recording:

This camcorder automatically focuses a subject from close-up to infinity. However, the correct focus may not be obtained depending on the recording conditions.
In this case, use the manual focus mode.



1. Press the **Control** button (▲ / ▼) to select **"Manual."**
   - The manual focus adjustment indicator appears.
2. Press the **Control** button (◀ / ▶) to select the desired indicator to adjust focus, then press the **OK** button.

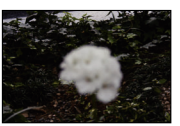
Focusing on a nearer subject

To focus on a nearer subject, press the **Control** button (◀).

Focusing on a farther subject

To focus on a farther subject, press the **Control** button (▶).

<Nearer subject >



<Further subject >

- The nearer or farther icon (/) appears between the indicators when focus adjustment reaches the end.
- The adjusted value is applied right after pressing the **Control** button (◀ / ▶) to adjust the focus.
- The manual focus setting will be applied and the ( ) indicator is displayed.

Manual focus is recommended in the following situations :

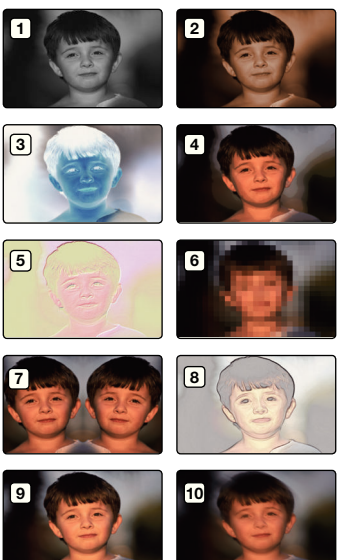
- Dark shooting subject
- When the background is too bright
- Subject through a window that is stained or wet
- Subject with dense horizontal or sloping stripes
- Distant subject behind a nearby wire fence
- Walls, atmosphere and other low-contrast subject
- Emitting strong light or reflecting subject
- Focusing on a subject near the boundary of the frame

- You can easily adjust the focus using the Shortcut menu button. ➥page 32
- Manual focusing focuses on a point in the framed scene while auto focusing focuses on the center area automatically.
- Use the zoom function to catch the desired target before manually adjusting the focus. If you use the zoom function after manual focusing, refocusing is required.
- Before focusing manually, check if the **"Digital Zoom"** is turned off. When **"Zoom Type"** is set to **"Digital Zoom"**, manual focusing will not be accurate. Turn the **"Digital Zoom"** off. ➥page 65

Digital Effect

- The digital effect enables you to give a creative look to your recording.
- Select the appropriate digital effect for the type of picture that you wish to record and the effect you wish to create.
- There are 10 different digital effect options.

item	contents	on-screen display
"Off"	Disables the function.	None
1 **"BLK&WHT"**	Changes the images into black and white.	
2 **"Sepia "**	This mode gives the images a reddish brown pigment.	
3 **"Negative"**	Reverses the colors and the brightness, creating the look of a negative.	
4 **"Art"**	Adds artistic effects to an image.	
5 **"Emboss"**	This mode creates a 3D effect (embossing).	
6 **"Mosaic"**	A mosaic overlay appears on an image.	
7 **"Mirror"**	This mode cuts the image in half and makes a mirrored image on the other half.	
8 **"Pastel"**	This mode applies a pale pastel drawing effect to an image.	
9 **"Cosmetic"**	This mode helps correct facial imperfections.	
10 **"Step printing"**	Technique of recording the image in segments.	



recording options

Fader

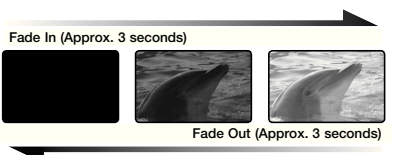
You can give your recording a professional look by using special effects such as fade in at the beginning of a sequence or fade out at the end of a sequence.

item	contents	on-screen display
"Off"	Disables the function.	None
"In"	As soon as you start recording, the fader will be executed.	
"Out"	When the recording is done, the fader will be executed.	
"In-Out"	When you start or stop recording, the fader will be executed accordingly.	

Fade in
Press the **Recording start/stop** button when **"Fader"** is set to **"In."** Recording starts with a dark screen and then the image and sound are faded in.

Fade out
Press the **Recording start/stop** button when **"Fader"** is set to **"Out."** Recording stops as the image and sound are faded out.

Fade in-out
Press the **Recording start/stop** button when **"Fader"** is set to **"In-Out."** Recording starts with a dark screen and then the image and sound are faded in and recording stops as the image and sound are faded out.



This function is disabled after being used one time.

Wind Cut

You can reduce wind noise when recording sound from the built-in microphone. If **"Wind Cut : On"** is set, the low-frequency components in the sound picked up by the microphone will be cut off during recording: This makes it easier to hear voice and sound during playback.

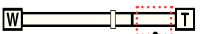
- Use the Wind Cut feature when recording in windy places such as a beach.

item	contents	on-screen display
"Off"	Disables the function	None
"On"	Minimizes wind noise or other noise while recording.	

When **"Wind Cut"** is **"On"**, some low frequency sound is eliminated along with the sound of the wind.

Zoom Type

The memory camcorder offers three types of zoom: optical, intelligent and digital zoom when recording videos.



This right side of the bar shows the digital zooming zone.
The zooming zone appears when you move the zoom lever.

item	contents	on-screen display
"Optical Zoom"	Only optical zoom is available up to 52x.	None
"Intelli-Zoom"	- The camcorder zooms the full width of the image sensor to obtain a larger zoom range without any deterioration in image quality. - Intelli-zoom is available up to 65x.	None
"Digital Zoom"	- When this option is selected, the camcorder will switch automatically to the digital zoom when you zoom in beyond the optical or intelligent zoom range. With the digital zoom the image is processed digitally so image quality will deteriorate the more you zoom in. - Digital zoom is available up to 2200x.	None

- The image quality may deteriorate depending on how much you zoom in on the subject.
- Maximum zooming may result in lower image quality.
- The Optical Zoom and the Intelli-Zoom preserve the video quality, but during digital zoom the image quality may suffer.
- The zoom range will change depending on the aspect ratio of the video.

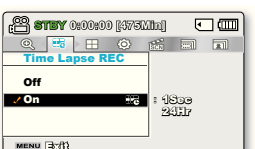
recording options

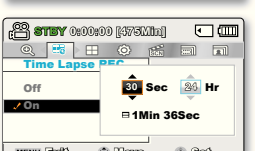
Time Lapse REC

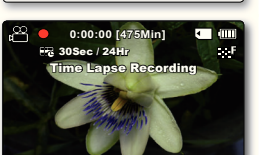
- Time Lapse REC records still images at specific intervals you can set, and plays them as one video file.
- This function is useful for observing the movement of clouds, the changes in daylight or blooming flowers, etc.

item	contents	on-screen display
"Off"	Disables the function.	**None**
"On"	When you start video recording, images of the subject are captured and saved to the storage media by set interval and total recording period.	

Setting the Time Lapse REC mode:



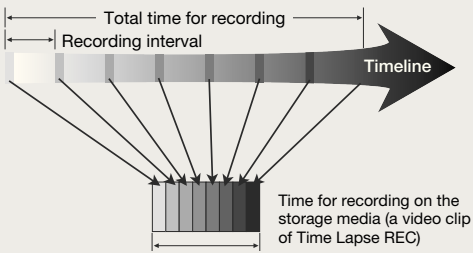




To record in the Time Lapse REC mode, you need to set the recording interval and total recording time in the menu.

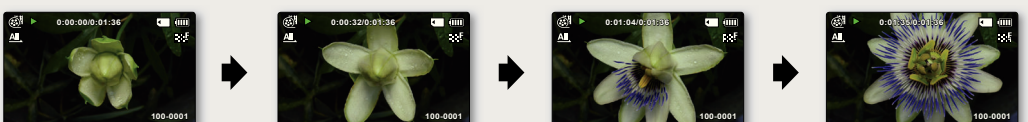
1. Press the **MENU** button.
2. Press the **Control** button (◀ / ▶) to select **"Time Lapse REC."**
3. Press the **Control** button (▲ / ▼) to select **"On"**, then press the **OK** button.
   - The recording interval and total time for recording items are displayed. (**"Sec":** seconds, **"Hr":** hours)
4. Set a desired recording interval (**"Sec"**) with the **Control** button (▲ / ▼).
5. Move to the next setting with the **Control** button (◀ / ▶) and set a desired total recording time (**"Hr"**) in the same way.
   - While you set the preparatory settings (recording interval and total recording time), the approximate time-lapse recording time will be displayed on the menu screen.
6. Press the **OK** button to finish the setting and press the **MENU** button to exit the menu.
7. After setting the Time Lapse REC mode, press the **Recording start/stop** button. The Time Lapse REC starts.
   - While playing back, it will display 30 images per second. (Sound is not available.) For example, if the recording interval was **"30"** seconds and the total recording time was **"24"** hours, images are automatically captured and saved in the storage media every 30 seconds for 24 hours. (After 24 hours of recording, playback will last for about **"1Min 36 Sec"**)

Example of Time Lapse REC


Total time for recording
Recording interval
Timeline
Time for recording on the storage media (a video clip of Time Lapse REC)

Time Lapse REC records image frames at a predefined interval produce a time-lapse video.
Time Lapse REC is useful for filming in the following situations:

- Blooming flowers
- Insect's skin-casting
- Clouds rolling by in the sky



- This function is disabled after being used one time.
- 30 captured images compose a video of 1 second length. Since the minimum length of a video to be saved by your camcorder is one second, the interval defines how long the Time Lapse Recording should be set for. For example, if you set the interval to "**30 Sec**," Time Lapse Recording should be set for at least 15 minutes to record a minimum video length of 1 second (30 images).
- Once the Time Lapse REC finishes recording for its total recording time, it switches to standby mode.
- Press the **Recording start/stop** button if you want to stop the Time Lapse REC.
- Audio is not recorded during Time Lapse Recording.
- When a video recording fills up 1.8GB of storage media, a new recording file is automatically started at that point.
- When the battery is discharged exhausted during Time Lapse REC, it saves recording up to that point and switches to standby mode. After a while, it displays a warning message, then turns off automatically.
- When memory runs out while performing Time Lapse REC, the camcorder switches to standby mode after saving what was recorded so far.
- We recommend using the AC power adaptor when using the Time Lapse REC function.
- When a time lapse recording starts, a message of **"Time Lapse Recording"** blinks on the screen and it appeared to be as if the screen is stopped. This is a normal operation; do not remove the power source or memory card from the camcorder.

recording options

Guideline

- Guideline displays a certain pattern on the LCD screen so that you can easily set the image composition when recording images.
- The camcorder provides 3 types of guidelines.

item	contents	on-screen display
"Off"	Disables the function.	None
"Cross"	Records the subject placed in the center.	
"Grid"	Records the subject on the horizontal or vertical composition or close-up.	
"Safety Zone"	Records the subject within safety zone which prevents them from being cut when editing in 4:3 for left and right and 16x9 (2.35:1) for top and bottom. Set **"Safety Zone"** when you want to have various subjects in one scene with the proper size.	

- Positioning the subject at the cross point of the guideline provides a balanced composition.
- The Guideline feature cannot be recorded on the images being recorded.

playback options

MENU ITEMS

- Accessible items in the menu vary depending on the operation mode.
- See pages 46-50 for playback information and button operation.
- See pages 70-81 for details on menu items during playback.

● : Possible
× : Not possible

Playback menu items

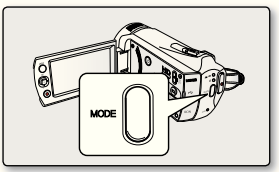
Items		Video ( )	Photo ( )	Default value	Page
Multi View Option (Thumbnail index view only)		●	●	Normal View	70
Play Option		●	×	Play All	71
Delete		●	●	-	72
Protect		●	●	-	73
Copy *		●	●	-	74
Story-Board Print		●	×	-	76
Edit	Divide	●	×	-	77
	Combine (Thumbnail index view only)	●	×	-	79
Slide Show		×	●	-	80
Slide Show Option		×	●	-	81
File Info		●	●	-	81
Settings		●	●	-	82

- Items marked with * are available only with SMX-K44/K45 models.
- In general, use of functions both in thumbnail display and full image display employs the same method, while their detailed options may be different.

playback options

MULTI VIEW OPTION

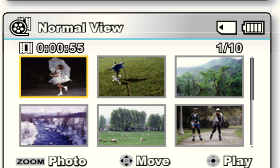
The Multi View Option enables you to sort thumbnails of recorded video or photos in the order of recording, recorded date, and the iSCENE mode for playback.



1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
   - Set the appropriate storage media. (SMX-K44/K45 only) ➥page 36
     (If you want to playback images on a memory card, insert a memory card.)
2. Press the **MODE** button to select the Play mode.
3. Select the Video or Photo thumbnail index view screen.
   - You can simply switch between video and photo thumbnail view using the zoom lever.
4. Press the **MENU** button → **Control** button (◀ / ▶) to select **"Multi View Option."**
5. Select an option by pressing the **Control** button (▲ / ▼) and then press the **OK** button.

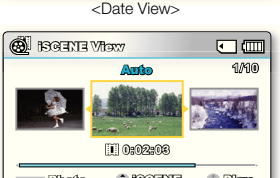
item	contents
"Normal View"	- The video file thumbnails are displayed sequentially in the order of recorded time. - The thumbnail of the last recorded or played file is highlighted.
"Date View"	- Recorded files will be sorted by the recorded date in thumbnails.
"iSCENE View"	- Recorded files will be sorted by the iSCENE mode used at the recording time in thumbnails.

6. You can use the **Control** button (▲ / ▼ / ◀ / ▶) to select a sorted item.



<Normal View>

<Date View>

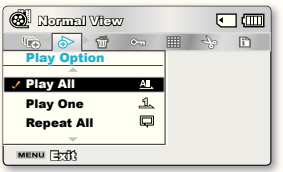


<iSCENE View>

This function is available only in the thumbnail index view screen.

PLAY OPTION

You can set a specific playback style according to your preference.



1. Press the **MENU** button → **Control** button (◀ / ▶) to select **"Play Option."**
2. Select an option by pressing the **Control** button (▲ / ▼) and then press the **OK** button.

item	contents	on-screen display
"Play All"	Plays back from the selected video to the last video.	
"Play One"	The selected video will be played.	
"Repeat All"	All videos will be played repeatedly.	
"Repeat One"	The selected video will be played repeatedly.	

playback options

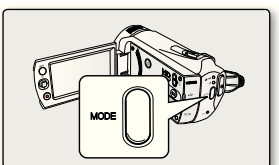
DELETE

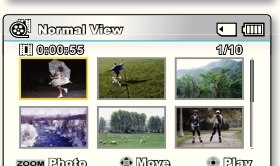
You can erase your recordings one by one, or all at once.

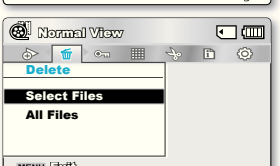
1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
   - Set the appropriate storage media. (SMX-K44/K45 only) ➥page 36
     (If you want to playback images on a memory card, insert a memory card.)
2. Press the **MODE** button to select the Play mode.
3. Select the Video or Photo thumbnail index view screen.
   - You can simply switch between video and photo thumbnail view using the zoom lever.
4. Press the **MENU** button → **Control** button (◀ / ▶) to select **"Delete."**
5. Select an option by pressing the **Control** button (▲ / ▼) and then press the **OK** button.

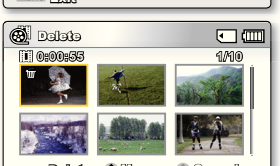
item	contents
"Select Files"	Deletes individual selected videos (or photos). - To delete individual videos (or photos), select the desired videos (or photos) to delete by pressing the **OK** button, then press the **MENU** button to delete. - The indicator (🗑) is displayed on the selected videos (or photos). - Pressing the **OK** button toggles the selection and release.
"All Files"	Deletes all videos (or photos).

6. The pop-up selection menu will appear depending on the selected menu item. In this case, select the desired item with the **Control** buttons (◀ / ▶) and the **OK** button.









- Note that removing the battery pack or disconnecting the AC power adaptor while you delete files may damage the storage media.
- To protect important images from accidental deletion, activate the image protection. ➥page 73
- The protect (⚿) indicator will blink if you try to delete an image that was previously protected. ➥page 73
- You must release the protect function to delete the image.
- If the write protection tab on a memory card is set to lock, you cannot delete. ➥page 38
- You can also format the storage media to delete all the images at once. Be aware that all files and data including protected files will be erased.

PROTECT

- You can protect saved important videos (or photos) from accidental deletion.
- Protected images will not be deleted unless you release the protection or format the memory.

1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
- Set the appropriate storage media. (SMX-K44/K45 only) ➥page 36
  (If you want to playback images on a memory card, insert a memory card.)

2. Press the **MODE** button to select the Play mode.

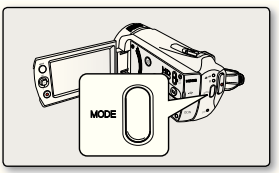
3. Select the Video or Photo thumbnail index view screen.
- You can simply switch between video and photo thumbnail view using the zoom lever.

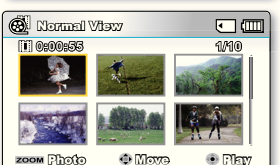
4. Press the **MENU** button → **Control** button (◀ / ▶) to select **"Protect."**

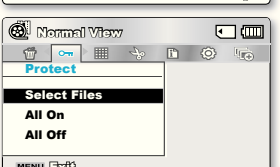
5. Select an option by pressing the **Control** button (▲ / ▼) and then press the **OK** button.

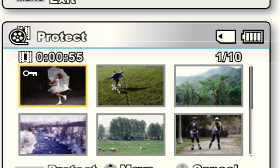
item	contents
"Select Files"	Protects selected videos (or photos) from deletion - To protect individual videos (or photos), select the desired videos (or photos) by pressing the **OK** button, then press the **MENU** button to confirm. - The indicator (⊶) is displayed on the selected videos (or photos). - Pressing the **OK** button toggles the selection between protection and release.
"All On"	Protects all videos (or photos).
"All Off"	Cancels the protection for all videos (or photos).

6. The pop-up selection menu will appear depending on the selected menu item. In this case, select the desired item with the **Control** buttons (◀ / ▶) and the **OK** button.









- Protected videos (or photos) will show the indicator (⊶) when they are displayed.
- If the write protection tab on a memory card is set to lock, you cannot set image protection.

playback options

COPY (SMX-K44/K45 ONLY)

- Images are copied to the destination storage while original images are left in the source storage.
- It copies from the currently used memory to another. For example, if the built-in memory was used, it copies to a memory card.

1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
- Set the appropriate storage media. (SMX-K44/K45 only) ➥page 36
  (If you want to playback images on a memory card, insert a memory card.)

2. Press the **MODE** button to select the Play mode.

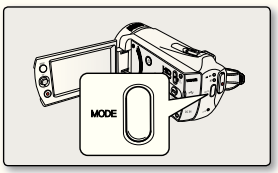
3. Select the Video or Photo thumbnail index view screen.
- You can simply switch between video and photo thumbnail view using the zoom lever.

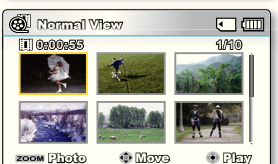
4. Press the **MENU** button → **Control** button (◀ / ▶) to select **"Copy."**

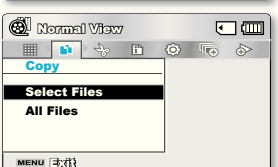
5. Select an option by pressing the **Control** button (▲ / ▼) and then press the **OK** button.

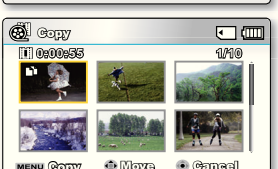
item	contents
"Select Files"	Copies the individual videos (or photos). - To copy individual videos (or photos), select the desired videos (or photos) by pressing the **OK** button. - The indicator ( ) is displayed on the selected videos (or photos), then press the **MENU** button to confirm. - Pressing the **OK** button toggles between selecting and releasing the copy function.
"All Files"	Copies all the videos (or photos).

6. The pop-up selection menu will appear depending on the selected menu item.
In this case, select the desired item with the **Control** buttons (◀ / ▶) and the **OK** button.
- Images are copied in another storage media.







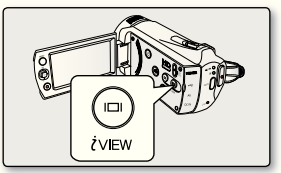


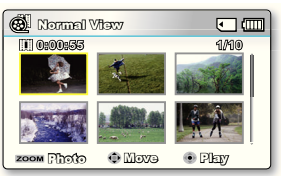
- If a memory card is not inserted, you cannot perform the **"Copy"** function.
- If free space available on the storage is insufficient, copying may not be possible. Delete unnecessary images. ➥page 72
- Copied videos (or photos) have no protection even if the original is set to be protected.
- Copying may take a while depending on the number of files and file size.
- Copying may not operate if the battery charge is insufficient. If available, use the AC adaptor while copying to prevent power disconnection.
- Note that removing the battery pack or disconnecting the AC power adaptor while you copy files may damage the storage media.
- Follow the same instructions to copy video clips (or photos) from a memory card to the built-in memory. Before using this function, select the storage media that contains the desired videos (or photos) to be copied.

USING ¿VIEW

This function provides a preview of the 16 image storyboard from a selected video to be printed. ➥page 76

1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
   - Set the appropriate storage media. (SMX-K44/K45 only) ➥page 36
     (If you want to playback images on a memory card, insert a memory card.)
2. Press the **MODE** button to select the Play mode.
3. Select the Video thumbnail index view screen.
   - You can simply switch between video and photo thumbnail view using the zoom lever.
4. Use the **Control** button (▲ / ▼ / ◀ / ▶) to select the desired video, press the **¿VIEW** button.
   - 16 i-Frame images appear on the LCD screen.
   - The images from the selected video are selected arbitrarily, and compose the preview of storyboard to be printed.
   - If you want to save the storyboard image on the storage media, press the **PHOTO** button. Then you can find the saved storyboard image in the photo play mode. ➥page 50





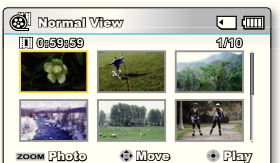
- **In the following case, it can not be extracted with all 16 i-Frame thumbnails:**
  - Recorded video is too short (To extract 16 i-Frame thumbnails from a video, its recorded time should be longer than 8 seconds.)
- This function is available only in the video thumbnail index view screen. Pressing the (⊡) button in STBY mode or full image display mode functions the same as the **Display** (⊡) button. ➥page 30

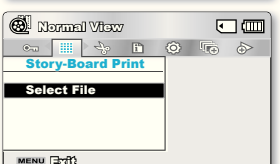
playback options

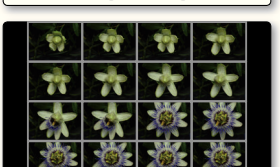
STORY-BOARD PRINT

This function captures 16 still images arbitrarily from the selected video and saves them into the storage media. It presents a quick overview of your video, helping you to understand the overall topic.

1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
   - Set the appropriate storage media. (SMX-K44/K45 only) ➥page 36 (If you want to playback images on a memory card, insert a memory card.)
2. Press the **MODE** button to select the Play mode.
3. Select the Video thumbnail index view screen.
   - You can simply switch between video and photo thumbnail view using the zoom lever.
4. Press the **MENU** button → **Control** button (◀ / ▶/**OK**) to select **"Story-Board Print" → "Select File."**
5. Use the **Control** button (▲ /▼ / ◀ / ▶) to select the desired videos, and then press the **OK** button.
   - A message appears asking for your confirmation.
6. Select **"Yes."**
   - The printed storyboard image files appear on the LCD screen for about 3 seconds.
   - Images to be captured are selected arbitrarily, and compose a storyboard of 16 images. The saved storyboard can be found in the storage media's DCIM folder, using a computer. ➥page 109





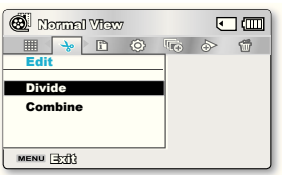


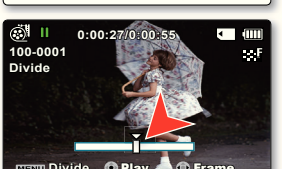
- Storyboard images are displayed in 4:3 aspect ratio. Hence, it may not display the entire image on the LCD screen. On a computer, it will display the entire image.
- **Using the ¡VIEW button, you can preview storyboard images to be printed. ➥page 75**
- The storyboard printing may not show all 16 i-Frame thumbnails in following case:
  - Recorded video is too short (To extract 16 i-Frame thumbnails from a video, its recorded time should be longer than 8 seconds.)

EDIT (DIVIDE)

You can divide a video clip as many times as you want in order to delete a section you no longer need.
The videos will be divided in groups of two.

1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
   - Set the appropriate storage media. (SMX-K44/K45 only) ➥page 36
     (If you want to playback images on a memory card, insert a memory card.)
2. Press the **MODE** button to select the Play mode.
3. Select the Video thumbnail index view screen.
   - You can simply switch between video and photo thumbnail view using the zoom lever.
4. Press the **MENU** button →**Control** button (◀ / ▶/**OK**) to select "**Edit**" → "**Divide**."
5. Select a desired video clip using the **Control** button (▲ /▼ / ◀ / ▶/**OK**).
   - The selected video clip will be paused.
6. Search the point of division by pressing the **Control** button (◀ / ▶/**OK**).
7. Press the **MENU** button to pause at the point of division.
   - A message appears asking for your confirmation.
8. Select **"Yes."**
   - If you want to delete an unwanted section of a video clip, divide the video first, and then delete the image (section) you no longer need. After dividing the video clip, you can also combine other desired videos. ➥page 79
   - The second image of the divided image will be displayed at the end of the thumbnail index.

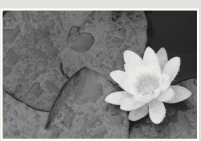




playback options

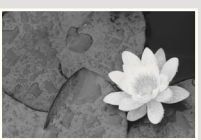
Example: You can divide a video clip into two in order to delete a section you no longer need.

1. Before dividing



0~60 seconds

2. After image is divided at 30 second point.



0~30 seconds

31~60 seconds

3. After deleting first image.

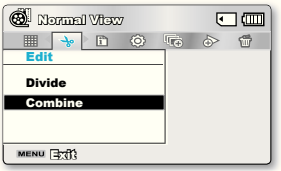
0~30 seconds

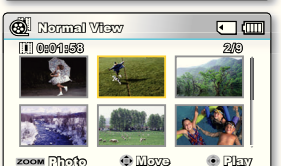
- One video clip is divided into two video clips.

- **The Divide function is not available in the following conditions:**
  - If the total recorded time of the video is less than 6 seconds.
  - If you trying to divide sections without leaving 3 seconds at the beginning and the end.
  - If the remaining section of the storage media space is less than approx. 40MB.
  - Videos recorded or edited by other devices.
  - Videos transferred to this camcorder by using Samsung Intelli-studio.
- You can not delete a protected image. You must first release the protect function to delete it. ➥page 73
- The division point may drift before or after the designated point by approximately 0.5 seconds.

EDIT (COMBINE)

You can combine two different video clips.





1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
   - Set the appropriate storage media. (SMX-K44/K45 only) ➥page 36
     (If you want to playback images on a memory card, insert a memory card.)
2. Press the **MODE** button to select the Play mode.
3. Select the Video thumbnail index view screen.
   - You can simply switch between video and photo thumbnail view using the zoom lever.
4. Press the **MENU** button → **Control** button (◀ / ▶/**OK**) to select **"Edit" → "Combine."**
5. Select a desired video clip using the **Control** button (▲ /▼ / ◀ / ▶/**OK**).
   - The (✔) indicator is displayed on the selected video clips.
   - Selecting the video thumbnail image toggles between the video thumbnail image being selected for combining (the (✔) indicator appears on image) or not (the (✔) indicator is removed from image).
6. Press the **MENU** button.
   - A message appears asking for your confirmation.
7. Select **"Yes."**
   - The two video clips are combined in the selected order and restored as one video clip.
   - The thumbnail of the first video clip will appear in the combined video clip.

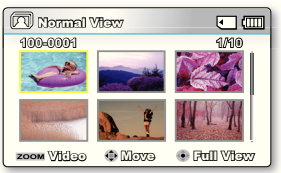
- **The combine function is not available in the following conditions:**
  - Videos in different resolution formats (TV Super Fine/TV Fine/TV Normal vs Web Fine/Web Normal) cannot be combined.
  - Videos in different aspect ratio cannot be combined. (4:3 vs 16:9 wide)
  - The video file recorded in the Time Lapse REC mode and normal record file cannot be combined.
  - If the total size of the two files to be combined exceeds approx. 1.8GB
  - If the remaining section of the storage media space is less than approx. 40MB.
  - If you combine videos having the same resolution but different qualities, the combined video will have the lower image quality for playback. (For example, if you combine a video clip of **"TV Super Fine"** with another video clip of **"TV Fine"**, which has the same resolution, then the combined video will be in **"TV Fine"** resolution and quality.)
  - Videos recorded or edited by other devices.
  - Videos transferred to this camcorder by using Samsung Intelli-studio.
- You cannot combine protected images. You must first release the protect function to paste it. ➥page 73
- The original video clips will not be preserved.
- A maximum of 2 video clips can be combined at a time.
- This function is available only in the thumbnail index view screen.

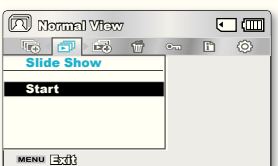
playback options

SLIDE SHOW

You can playback all the photos stored in the storage media automatically.

1. Open the LCD screen and then the camcorder is powered on automatically. ➥page 23
   - Set the appropriate storage media. (SMX-K44/K45 only) ➥page 36
     (If you want to playback images on a memory card, insert a memory card.)
2. Press the **MODE** button to select the Play mode.
3. Select the Photo thumbnail index view screen.
   - You can simply switch between video and photo thumbnail view using the zoom lever.
4. Press the **MENU** button → **Control** button (◀ / ▶) to select **"Slide Show"** → **"Start."**
5. Press the **OK** button.
   - The ( ) indicator is displayed. The Slide Show will start from the current image.
   - To end the slide show, press the **OK** button again.

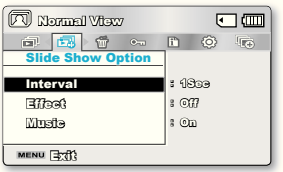




- 5 background music files are stored in the camcorder by default.
  When a slide show begins, it plays background music in arbitrary order.
- You can adjust the background music's volume level using the **Control** button (▲ / ▼) while in a slide show with music.

SLIDE SHOW OPTION

You can enjoy a slide show with various effects.



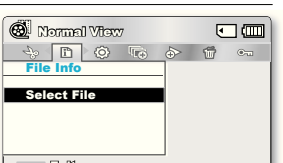
1. Press the **MENU** button → **Control** button (◀ / ▶) to select **"Slide Show Option."**
2. Select an option by pressing the **Control** button (▲ /▼ / ◀ / ▶) and then press the **OK** button.

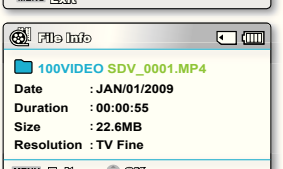
item	contents
"Interval"	Set the slideshow's image transition interval. (1 sec or 3 sec)
"Effect"	If the **"Effect"** is set to **"On"**, the slideshow displays images consecutively.
"Music"	If the **"Music"** is set to **"On"**, the slideshow will play back with background music. (The background music is selected randomly from 5 sample music files stored.)

3. The Slide Show will start with selected item.
   - To end the slide show, press the **OK** button again.

FILE INFO

You can see the image information for all images.





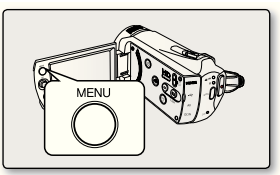
1. Press the **MENU** button → **Control** button (◀ / ▶/**OK**) to select **"File Info"** → **"Select File."**
2. Select a desired video clip using the **Control** button (▲ /▼ / ◀ / ▶/**OK**).
   - The information of the selected file is displayed as shown below.
     - Date
     - Duration
     - Size
     - Resolution
   - Press the **MENU** button again after confirming.

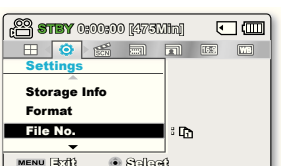
settings options

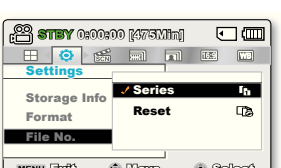
CHANGING THE MENU SETTINGS IN "SETTINGS"

You can change the menu settings to customise your camcorder.
Access the desired menu screen by following the steps below and change the various settings.

1. Open the LCD screen and then the camcorder is powered on automatically.
   ➥page 23
2. Press **MENU** button.
   - The menu screen appears.
3. Press the **Control** button (◀ / ▶) to select **"Settings."**
   - The menus in **"Settings"** mode will appear.
4. Select the desired submenu and menu item with the **Control** buttons (▲ / ▼ / ◀ / ▶) and the **OK** button.
   - To return to the normal screen, press the **MENU** button.
   - Depending on the mode selected, not all items are selectable for changing. (If there is no storage media inserted, it cannot be selected and will be dimmed on the menu: **"Storage Type (SMX-K44/K45 only)", "Storage Info", "Format"**, etc.)







Button Tips

a. **MENU** button : Use it to enter or exit the menu.
b. **Control** button (▲ / ▼ / ◀ / ▶) : Use it to move up/down/left/right
c. **OK** button : Use it to select or confirm the menu.

The pop-up selection menu will appear depending on the selected menu item.
In this case, select the desired item with the **Control** buttons (◀ / ▶) and the **OK** button.

MENU ITEMS

- You can setup the date/time, OSD language and display settings of the camcorder.

● : Possible
× : Not possible

Settings menu items (⚙)

Items	Record (📷/🎥) mode	Play mode (Thumbnail index screen)		Play mode (Full image display mode)		Default values	Page
		Video	Photo	Video	Photo		
Storage Type *	●	●	●	×	×	Memory	84
Storage Info	●	●	●	●	●	-	84
Format	●	●	●	×	×	-	85
File No.	●	●	●	●	●	Series	85
Time Zone	●	●	●	●	●	Home	86
Date/Time Set	●	●	●	●	●	-	88
Date Type	●	●	●	●	●	-	88
Time Type	●	●	●	●	●	12Hr	88
Date/Time Display	●	●	●	●	●	Off	89
LCD Brightness	●	×	×	×	×	0	89
LCD Color	●	×	×	×	×	0	89
Auto LCD Off **	●	●	●	●	●	On	90
Menu Design	●	●	●	●	●	Misty White	90
Transparency	●	×	×	×	×	0%	90
Beep Sound	●	●	●	×	×	On	91
Shutter Sound	●	●	●	●	●	On	91
Auto Power Off **	●	●	●	●	●	5 Min	91
Quick On STBY	●	×	×	×	×	5 Min	92
PC Software	●	●	●	●	●	On	93
TV Display	●	×	×	●	●	On	93
Default Set	●	●	●	×	×	-	93
Version	●	●	●	●	●	-	93
Language	●	●	●	●	●	English	93
Demo	●	×	×	×	×	On	94
Anynet+(HDMI-CEC)	●	●	●	●	●	On	94

- These menu items and default values may be changed without notice.
- There are some functions you cannot activate simultaneously in the menu. You cannot select the grey menu items.
- Items marked with * are available only with SMX-K44/K45 models.
- Items marked with ** are available only when the camcorder is supplied the power using the battery pack.

settings options

USING THE SETTINGS MENU ITEMS

Storage Type (SMX-K44/K45 only)

You can record videos (or photos) on the built-in memory or a memory card, so you should select the desired storage media before starting recording or playback.

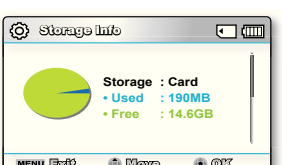
settings	contents	on-screen display
"Memory"	Select the built-in memory for storage medium. You can record or play back images on the built-in memory.	IN
"Card"	Select a memory card as storage medium. You can record or play back images on a memory card.	

If there is no storage media inserted, it cannot be selected and will be dimmed on the menu.

Storage Info

It shows you the storage information. You can view the storage media, used memory space and available memory space.

settings	contents	on-screen display
"Memory" (SMX-K44/K45 only)	It shows you the memory information of the built-in memory.	None
"Card"	It shows you the memory information of the inserted memory card.	None



- If there is no storage media inserted, it cannot be selected and will be dimmed on the menu.
- In the Storage Info display, you can check the used and available memory as well as the remaining recording time for each recording resolution. For the desired information, scroll the screen using the **Control** (▲ / ▼) button.

Format

Use this function if you want to delete all files completely or to correct problems on the storage media.

settings	contents	on-screen display
"Memory" (SMX-K44/K45 only)	Formats the built-in memory.	None
"Card"	Formats a memory card.	None

WARNING

- Do not remove the recording medium or perform any other operation (such as turning off the power) during formatting. Also, be sure to use the provided AC adapter, as the recording medium may be corrupted if the battery becomes exhausted during formatting.
- If the recording medium becomes corrupted, format it again.

- **Do not format the storage media on a PC or other device.** Make sure to format the storage media on this camcorder.
- Format the memory card in the following cases:
  - before using a new memory card
  - a memory card formatted/recorded on other devices
  - when this camcorder cannot read the memory card
- A memory card with the protection tab set to lock will not be formatted.
- If there is no storage media inserted, it can not be selected. Then it will be dimmed on the menu.

File No.

File numbers are assigned to recorded files in the order they were recorded.

settings	contents	on-screen display
"Series"	Assigns file numbers in sequence even if a memory card is replaced with another one or after formatting, or after deleting all files. The file number is reset when a new folder is created.	None
"Reset"	Resets the file number to 0001 even after formatting, deleting all files or inserting a new memory card.	None

When you set **"File No."** to **"Series"**, each file is assigned with a different number so as to avoid duplicating file names. This is convenient when you want to manage your files on a PC.

settings options

Time Zone

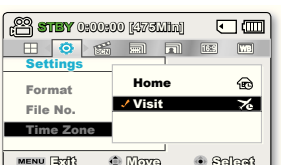
You can easily set the clock to the local time when using your camcorder while travelling.

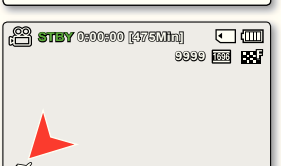
settings	contents	on-screen display
"Home"	The clock will be used according to your setting on the **"Date/Time Set"** menu. Select it when using this camcorder for the first time or when returning the clock to your hometown date/time setting.	**None**
"Visit"	When you visit a different time zone, it allows you to use the local time without changing your hometown time setting. The clock will be adjusted in accordance with the time difference between the two locations.	

Setting the clock to the local time ("Visit")

You can easily set the clock to the local time zone when travelling.

1. Press the **Control** button (▲ / ▼) to select the **"Time Zone"** in Settings mode, and then press the **OK** button.
   - The Time Zone screen will be displayed.
2. Select **"Visit"** with the **Control** button (▲/▼/ **OK**) , and then select your local area using the **Control** button (◀ / ▶).
   - You can check the time difference between **"Home"** and **"Visit."**
3. Press the **OK** button to confirm.
   - The clock is set to the time zone of the place you are visiting.
   - When **"Time Zone" : "Visit"** is set, the icon ( ) will be displayed next to the date and time display. ➥page 89





You can set the date and time in **"Date/Time Set"** from the **"Settings"** menu. ➥page 34

Cities used to set the time zone

Cities	Time zone	Cities	Time zone
London, Lisbon	+00:00	Adelaide	+09:30
Rome, Paris, Berlin, Stockholm, Madrid, Frankfurt	+01:00	Guam, Sydney, Brisbane	+10:00
Athens, Helsinki, Cairo, Ankara	+02:00	Solomon Islands	+11:00
Moskva, Riyadh	+03:00	Wellington, Fiji	+12:00
Teheran	+03:30	Samoa, Midway	-11:00
Abu Dhabi, Muscat	+04:00	Honolulu, Hawaii, Tahiti	-10:00
Kabul	+04:30	Alaska	-09:00
Tashkent, Karachi	+05:00	LA, San Francisco, Vancouver, Seattle	-08:00
Calcutta, New Delhi	+05:30	Denver, Phoenix, Salt Lake City	-07:00
Almaty, Kathmandu	+05:45	Chicago, Dallas, Houston, Mexico City	-06:00
Dacca	+06:00	New York, Miami, Washington D.C., Montreal, Atlanta	-05:00
Yangon	+06:30	Caracas, Santiago	-04:00
Bangkok	+07:00	Buenos Aires, Brasilia, Sao Paulo	-03:00
Hong Kong, Beijing, Taipei, Singapore, Manila	+08:00	Fernando de Noronha	-02:00
Seoul, Tokyo, Pyongyang	+09:00	Azores, Cape Verde	-01:00

The times are based on Greenwich Mean Time (GMT).

settings options

Date/Time Set

Set the current date and time so they can be recorded correctly. ➥page 34

Date Type

You can select the desired date type.

settings	contents	on-screen display
2009/01/01	Displays the date in the order of year, month (two-digit) and day.	**2009/01/01**
JAN/01/2009	Displays the date in the order of month, day and year.	**JAN/01/2009**
01/JAN/2009	Displays the date in the order of day, month and year.	**01/JAN/2009**
01/01/2009	Displays the date in the order of day, month (two-digit) and year.	**01/01/2009**

This function depends on the **"Date/Time Display"** setting.

Time Type

You can select the time format to display.

settings	contents	on-screen display
12 Hr	The time is displayed in 12 hour units.	**12:00 AM**
24 Hr	The time is displayed in 24 hour units.	**00:00**

This function depends on the **"Date/Time Display"** setting.

Date/Time Display

You can set the date and time to display on the LCD screen.

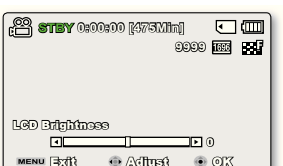
- Before you use the **"Date/Time Display"** function, you must set the date and time. ➥page 34

settings	contents	on-screen display
Off	Current date and time information is not displayed.	**None**
Date	Displays the current date.	**JAN/01/2009**
Time	Displays the current time.	**12:00 AM**
Date & Time	Displays the current date and time.	**JAN/01/2009 12:00 AM**

- The date/time will read **"JAN/01/2009 12:00 AM"** in the following conditions:
  - The built-in rechargeable battery becomes weak or dead.
- This function depends on the **"Date Type"** and **"Time Type"** setting.

LCD Brightness

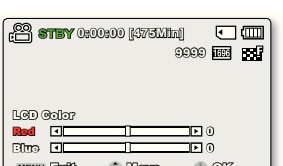
- You can adjust the brightness of the LCD screen to compensate for ambient lighting conditions.
- Pressing the **Control** button (▶) will brighten the screen whereas pressing the **Control** button (◀) will darken the screen.



- A brighter LCD screen setting consumes more battery power.
- If you adjust the LCD brightness when the ambient lighting is too bright, it is hard to see the monitor indoors.
- The LCD Brightness feature does not affect the brightness of images to be stored.
- You can adjust the LCD Brightness from -15 to 15.

LCD Color

- You can change the color impression of the screen with a variety of color options by adjusting the red and blue color range.
- When you set red and blue color range, the higher the figures, the brighter the LCD screen will be.
- You can adjust the LCD color (red/blue) from -15 to 15, using the **Control** button (▲/▼/◀/▶/**OK**).



- You can manipulate the color displayed on the LCD screen by adjusting the color ratio of red and blue.
- Adjusting the color display of LCD screen does not affect the image to be recorded.
- Higher the value will produce brighter LCD screen when adjusting color range of red and blue.

settings options

Auto LCD Off

To reduce power consumption, the brightness of the LCD screen is automatically dimmed if the camcorder is idle for more than 2 minutes.

settings	contents	on-screen display
"Off"	Disables the function	None
"On"	When the camcorder is idle for more than 2 minutes in STBY mode, or for more than 5 minutes when recording a video, the power saving mode starts by dimming the LCD screen.	None

- When this **"Auto LCD Off"** function is enabled, you can press any button on the camcorder to return LCD brightness to normal.
- **Auto LCD Off will be disabled in the following cases:**
  - If the DC power cable (AC power adaptor, USB cable) is connected

Menu Design

You can select the desired menu design.

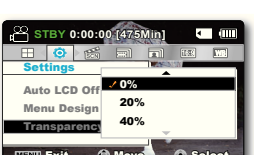
- **"Misty White" → "Premium Black "**

Transparency

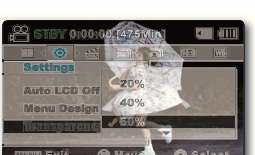
You can select the desired transparency to display the menu.

- **"0%" → "20% " → "40%" → "60%"**

The setting value is applied to the menu screen of Record mode only.



<Transparency 0%>



<Transparency 60%>

Beep Sound

You can set the beep sound to on/off. If there is a beep sound when operating the menu settings, the setting is turned on.

settings	contents	on-screen display
"Off"	Disables the function	None
"On"	When on, a beep will sound every time a button is pressed.	None

The Beep sound function is canceled in the following cases:
- During recording, playing
- When the camcorder has a cable connection. (AV cable or mini HDMI cable)

Shutter Sound

You can turn the shutter sound on or off.

settings	contents	on-screen display
"Off"	Disables the function	None
"On"	When on, the shutter will sound with each press of the **PHOTO** button.	None

Auto Power Off

To save battery power, you can set the **"Auto Power Off"** function which turns off the camcorder if there is no operation for a certain period of time.

settings	contents	on-screen display
"Off"	The camcorder does not turn off automatically.	None
"5 Min"	For power saving purpose, the camcorder will automatically turn power off if there is no operation for 5 minutes in STBY mode or in thumbnail index view.	None

- **Auto Power Off will be disabled in the following cases:**
  - If the DC power cable (AC power adaptor, USB cable) is connected
  - While the **"Demo"** function is running
  - During recording, playing (Pause excluded), or a slideshow
  - While the **"Quick On STBY"** function is running (Record mode)
- Press the **Power** (⏻) button to restart the camcorder.

settings options

Quick On STBY

When you are going to record frequently for an extended time, use the Quick On STBY function. In standby mode, closing the LCD screen will commence the Quick On STBY mode to reduce energy consumption. Once you are ready to record again, this function enables the camcorder to come on quickly from the power saving mode.

settings	contents	on-screen display
"Off"	In the standby mode, closing the LCD screen turns off the camcorder.	None
"5 Min"	In the standby mode, closing the LCD screen will soon execute the Quick On STBY mode, and then the camcorder turns off after 5 minutes.	None
"10 Min"	In the standby mode, closing the LCD screen will soon execute the Quick On STBY mode, and then the camcorder turns off after 10 minutes.	None
"20 Min"	In the standby mode, closing the LCD screen will soon execute the Quick On STBY mode, and then the camcorder turns off after 20 minutes.	None

- Turning off the camcorder after use is always recommended to reduce the energy consumption, however, you can effectively use the Quick On STBY function for the frequent shooting conditions in the specified time schedule.
- In the Quick On STBY mode, **“Auto Power Off: 5 Min”** setting is disabled.
- The mode indicator keeps blinking in the Quick On STBY mode.
- **The Quick On STBY mode is not available in the following conditions:**
  - When the LCD screen is open.
  - When a video cable (HDMI, AV) or the USB cable is connected to the camcorder.
  - When operating the buttons on the camcorder.

PC Software

If you set PC Software to on, you can simply use the PC software by connecting the USB cable between the camcorder and your PC. You can download the stored videos and photos stored on the camcorder to your PC's hard disk. Editing video/photo files is also available using the PC software.

settings	contents	on-screen display
"Off"	Disables the function	None
"On"	You can simply use the PC software by connecting the USB cable between the camcorder and your PC.	None

The PC Software is compatible with the Windows OS only. ➥page 100

TV Display

You can select the output path of the OSD (On Screen Display).

settings	contents	on-screen display
"Off"	The OSD appears in the LCD screen only.	None
"On"	The OSD appears in the LCD screen and TV. (Connecting to a TV ➥page 98)	None

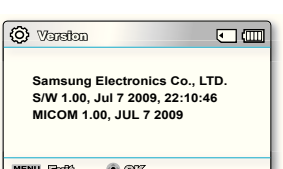
Default Set

You can initialise your camcorder settings to the factory defaults (initial settings at the factory).
Initialising the camcorder settings to factory defaults does not affect recorded images.

After resetting the camcorder, set **"Time Zone"** and **"Date/Time Set."** ➥page 34

Version

The version information may be changed without notice for improvement.



Language

You can select a desired language to display the menu and messages. ➥page 35

settings options

Demo

Demonstration automatically shows you the major features that are included with your camcorder so that you may use them more easily.

settings	contents	on-screen display
"Off"	Disables the function	None
"On"	Activates demonstration mode and shows various features on the LCD screen.	None

Using the Demo function

- The Demo mode is canceled in the following cases:
  - If any button is operated (**Recording start/stop, PHOTO, EASY Q**, etc.)
    However, the camcorder will enter the Demo mode automatically after 5 minutes in STBY mode if it is idle for 5 minutes without operation. If you don't want the Demo function to start, set **"Demo"** to **"Off"**.

The Demo function does not operate in the following cases:

- If **"Auto Power Off"** is set to **"5 Min"**(uses the battery as main power), the Auto Power Off function will turn the camcorder off before Demo can run.

Anynet+ (HDMI-CEC)

This camcorder supports Anynet+. Anynet+ is an AV network system that enables you to control all connected Samsung AV devices with an Anynet+ supported Samsung TV remote control.

settings	contents	on-screen display
"Off"	Disables the function	None
"On"	The Anynet+ function is enabled.	None

- When you turn on the camcorder that is connected to an Anynet+ supporting TV with an HDMI cable, the TV (Anynet+ supported) is automatically turned on. If you do not want to use this Anynet+ function, set the **"Anynet+ (HDMI-CEC)"** to **"Off."**
- For details on the Anynet+ (HDMI-CEC) function, refer to the user manual of Samsung's Anynet+ supported TV.

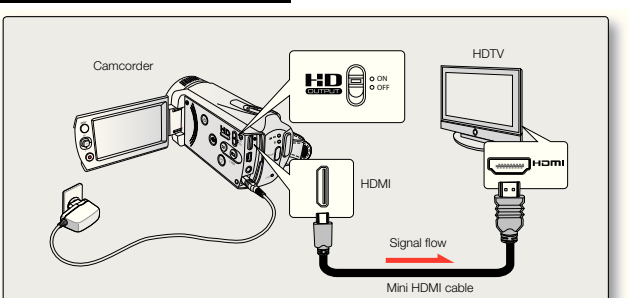
connecting to other devices

You can enjoy viewing your video recorded in SD in HD quality by setting the **HD OUTPUT** switch on the side of your camcorder to **“ON”**. This connection is used when upconverting SD quality recorded images to HD for playback on an HDTV. When playing back SD-quality (720x480/60i) videos on a HDTV, the images are upconverted to 1280x720/60p or 1920x1080/60p. The connection methods and quality of the image viewed on the TV screen differ depending on what type of TV is connected, and the connectors used. To playback high quality videos from your camcorder, check if your TV set supports the “1920x1080p” or "1280x720p" resolutions. **This camcorder supports HDMI output to deliver high-definition video transfer.**

CONNECTING TO A TV

- You can view the recorded videos and photos on a large screen by connecting the camcorder to an HDTV or normal TV.
- Select the HDMI jack on your TV. For more information about the connectors and the connection methods, refer to your TV's user manual.

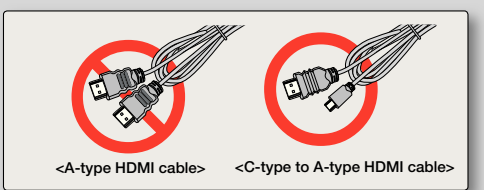
Connecting to a high definition TV



1. Turn on the camcorder and connect a Mini HDMI cable to the HDMI jack on your TV.
   - When connecting a cable, the connected device may not be recognized if the camcorder is turned off.
2. Set the **HD OUTPUT** switch on the side of your camcorder to **“ON”**.
   - Setting the **HD OUTPUT** switch to **“OFF”** displays the movie in its original quality.
3. Turn on your TV and set the TV’s input selector to the Input your camcorder is connected to.
   - Refer to the TV’s instruction manual to see how to select the TV input.

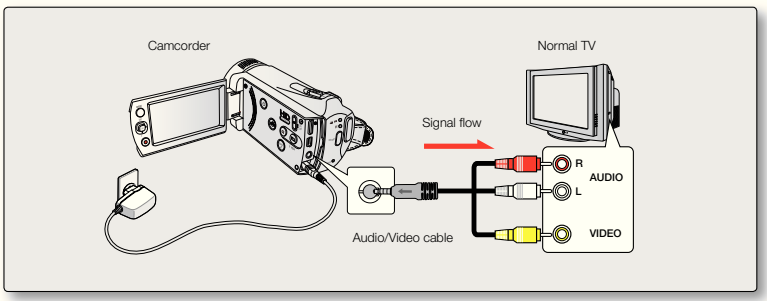
What is Anynet+ function?
You can use the same remote control for devices that support the Anynet + function. You can use the Anynet + function if the camcorder is connected with an HDMI cable to an Anynet+ supported TV. For more information, refer to the Anynet+ supported TV's user manual.

Understanding the HDMI cable:
HDMI (High Definition Multimedia Interface) is a compact audio/video interface for transmitting uncompressed digital data. The HDMI jack on your camcorder is used only for output.
Only a C-type to A-type HDMI cable can be used with this camcorder.



- The HDMI jack on the camcorder is provided for output usage only.
- If the Anynet+ supported TV is connected with the camcorder, turning on the camcorder may turn the TV's power on. If you don't want this function, set **"Anynet+ (HDMI-CEC)"** to **"Off."** ➥page 94
- Use only the HDMI 1.3 cable when connecting to the HDMI jack of this camcorder. If the camcorder is connected with other HDMI cables, the screen display may not work.

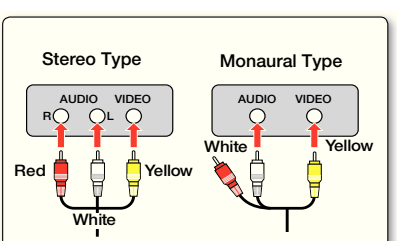
Connecting to a normal (standard definition) TV (4:3)



Use the provided Audio/Video cable to connect the camcorder to a TV as follows:

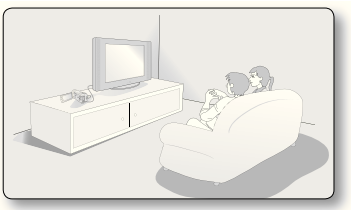
1. Connect the provided Audio/Video cable to the Audio/Video cable to the TV.
2. Turn on your TV and set the TV's input selector to the Input your camcorder is connected to.
   - Refer to the TV's instruction manual to see how to select the TV input.

- If only a mono audio input is available on the TV set, use the white plug (audio L) on the audio cable.
- Do not use excessive force when connecting the cables.
- It is recommended to use the AC power adaptor as the power source.
- Before connecting, make sure that the volume on the TV is turned down: forgetting this may cause feedback from the TV speakers.
- Carefully connect the input and output cables to the corresponding connections on the device the camcorder is being used with.



VIEWING ON A TV SCREEN

You can enjoy widescreen recordings on an HDTV (or a regular TV).



1. Turn on the TV and set the input selector to the input connection the camcorder is connected to.
   - Refer to your TV's instruction manual to see how to set the input selector on your TV.
2. Select the playback mode on your camcorder and start to playback videos.
   - Press the **MODE** button to select the Play mode. ➥page 23
   - This camcorder supports the Anynet+ function, therefore, you can use the same remote control for both devices if connected with HDMI cable to the Anynet+ support TV. ➥page 94

- Adjust the volume to a moderate level. If the volume is too high, the video information may include noise.
- If the **"TV Display"** is set **"Off",** the TV screen will not display the camcorder's OSD (On Screen Display) menus. ➥page 93
- You will only hear audio from the camcorder on your TV in Video playback mode.
- If you record videos in 4:3 mode, then connect the camcorder to an HDTV via HDMI, your videos will play back in 16:9 mode.

Image display depending on LCD and TV screen ratio

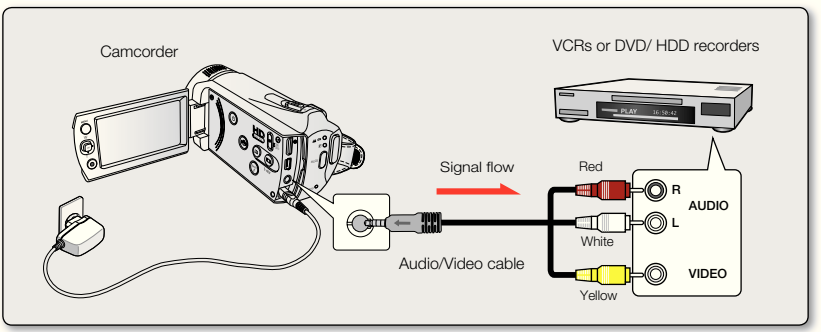
■ Icon ● Subject

	Video	Photo	LCD	TV	
				16:9	4:3
16:9					
4:3					

Refer to page 56 for the **"16:9 Wide"** setting.

RECORDING (DUBBING) IMAGES ON A VCR OR DVD/HDD RECORDER

You can record (dub) images played back on this camcorder onto other video devices, such as VCRs or DVD/HDD recorders. Use the Audio/Video cable (provided) to connect the camcorder to another video device as shown in the following figure:



1. Turn on the camcorder and press the **MODE** button to select the Play mode. ➥page 46
2. Insert the recording media in the recording device.
   - If your recording device has an input selector, set it to the input mode.
3. Connect your camcorder to the recording device (VCRs or DVD/HDD recorders) with the supplied AV cable.
4. Start recording on the recording device, then start playback on your camcorder.
   - Refer to the instruction manuals supplied with your recording device for details.
5. When dubbing is finished, stop the recording device, and then your camcorder.

- Videos recorded on this camcorder can be dubbed by connecting with the supplied composite/AV cable. All the recorded videos will be dubbed with SD (standard definition) image quality.
- You cannot dub to a recorder with an HDMI cable.
- Since dubbing is performed via analog data transfer, the image quality may deteriorate.
- To hide the screen indicators (such as a counter, etc.) on the screen of the monitor device connected, set **"TV Display: Off."** ➥page 89
- To record the date/time, display it on the LCD screen. ➥page 104

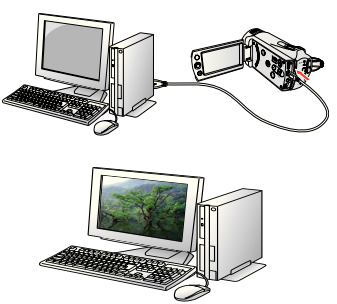
using with a Windows computer

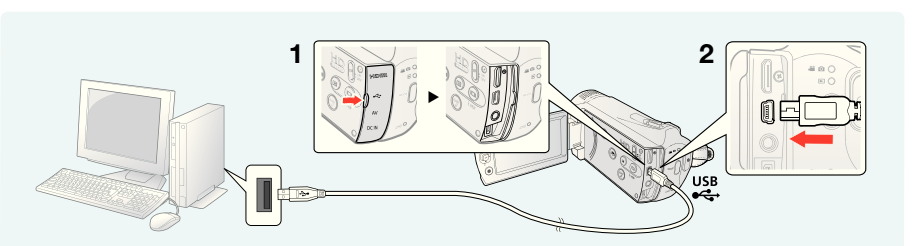
CHECKING YOUR COMPUTER TYPE

This chapter explains how to connect the camcorder to a computer using the USB cable.

Check your computer type before using!!!

To view your recordings on a computer, you need to check your computer type first. Then, take the steps below according to your computer type.

Using with Windows		Using with Macintosh
Connect your camcorder to the computer using the USB cable. • The built-in editing software Intelli-studio, runs on the PC automatically once the camcorder is connected to a Windows computer. (When you specify **"PC Software: On"**). ➥page 93		• The built-in software on your camcorder, 'Intelli-studio', is not Macintosh compliant.
Play back or edit your recordings on the computer using the built-in Intelli-studio application. ➥page 104-105		
You can also upload your recordings to YouTube or other web sites using Intelli-studio. ➥page 106		



WHAT YOU CAN DO WITH A WINDOWS COMPUTER

You can enjoy the following operations by connecting your camcorder to your Windows computer by using a USB cable.

Main Functions

- By using the built-in editing software, 'Intelli-studio' on your camcorder, you can enjoy the following operations:
  - Playing back recorded videos or photos. ➥page 104
  - Editing recorded videos or photos. ➥page 105
  - Uploading the recorded videos and photos to YouTube or Flickr, etc. ➥page 106
- You can transfer or copy the files (videos and photos) saved on the storage media to your computer. (Mass storage function) ➥page 108

System Requirements

The following requirements must be met for using the built-in editing software (Intelli-studio):

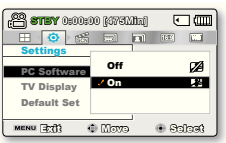
Items	System Requirements
OS (Operating System)	Microsoft windows Vista or XP
CPU	Intel® Pentium®4 3.0 GHz or higher AMD Athlon FX™ 3.0 GHz or higher
RAM	512 MB (1 GB or higher recommended)
Video Card	nVIDIA Geforce 7600GT or higher AMD(ATI) Radeon X1600 series or higher
Display	1024 x 768, 16-bit color or higher (1280 x 1024, 32-bit color recommended)
USB	USB 2.0 support
Direct X	DirectX 9.0 or higher

- System requirements mentioned above are recommendations. Even on a system that meets the requirements, operations may not be ensured depending on the system.
- On a slower computer than recommended, video playback may skip frames or operate unexpectedly.
- When the version of DirectX on your computer is lower than 9.0, install the program in version 9.0 or higher.

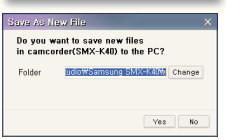
USING THE INTELLI-STUDIO PROGRAM

Using the built-in Intelli-studio program in your camcorder, you can transfer video/photo files onto your PC and edit them on your computer. The Intelli-studio offers the most convenient way for you to manage video/photo files by using the simple USB cable connection between the camcorder and your PC.

Step 1. Connecting the USB cable



1. Set the menu setting to **"PC Software: On".** ➥page 93
   - You will find the default menu settings are set as shown at right.
2. Connect the camcorder and the PC with the USB cable.
   - A new file saving screen appears with the Intelli-studio main window.
   - According to your computer type, the corresponding removable disk window appears.
3. Click **"Yes",** the uploading procedure will start. Click **"Yes"** to confirm.
   - If you do not want to save a new file, select **"No."**



Disconnecting the USB cable

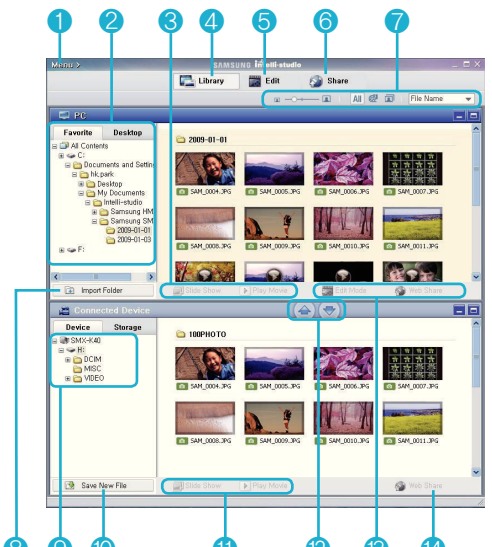
After completing the data transfer, make sure to disconnect the cable in the following way:

1. Click on the "Safely Remove Hardware icon" icon on the taskbar.
2. Select "USB Mass Storage Device", and then click "Stop".
3. If the "Stop a Hardware device" window appears, click "OK."
4. Disconnect the USB cable from the camcorder and PC.

- Use the provided USB cable. (Supplied by Samsung)
- Don't apply excessive force when inserting or extracting the USB cable into/from a USB jack.
- Insert the USB after checking the correct direction of its insertion.
- We recommend using the AC power adaptor as power supply instead of the battery pack.
- When the USB cable is connected, turning the camcorder on or off may cause the PC to malfunction.
- If you disconnect the USB cable from the PC or the camcorder while transferring data, the data transfer will stop and the data may be damaged.
- If you connect the USB cable to a PC via a USB HUB or simultaneously connect the USB cable along with other USB devices, the camcorder may not work properly. If this occurs, remove all USB devices from the PC and reconnect the camcorder.
- According to your computer type, the Intelli-studio program may not run automatically. In this case, open the desired CD-ROM drive that has the Intelli-studio program in My Computer and run iStudio.exe.
- When a USB cable is connected, if you have EmoDio (Samsung's MP3 player software) installed on your computer, the EmoDio software may load first.

Step 2. About the Intelli-studio main window

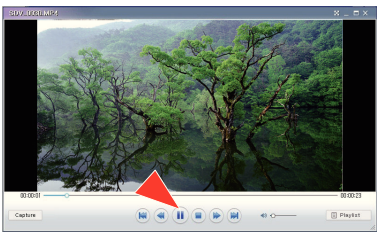
- When the Intelli-studio starts up, thumbnails of videos and photos are displayed in the main window.



1. Menu items
2. Selects the Desktop or Favorite on the PC.
3. Slide show of the photo files from the PC.
   Playback of the video files from the PC.
4. Switches to Library of the PC and connected camcorder.
5. Switches to Edit mode.
6. Switches to Share mode.
7. Changes the size of thumbnails.
   Displays all files (videos and photos)/Displays video files only.
   Displays photo files only.
   Sorts the files.
8. Imports folders from PC.
9. Selects the connected camcorder or storage.
10. Saves new files to PC.
11. Slide show of the photo files from the connected camcorder.
    Playback of the video files from the connected camcorder.
12. Saves the selected file to PC.
    Saves the selected file to connected camcorder.
13. Moves the file selected in the PC to the Edit mode.
    Moves the file(s) selected in the PC to the Share mode.
14. Moves the file(s) selected in the connected camcorder to the Share mode.

Step 3. Playing back videos (or photos)

You can play back the recordings conveniently using the Intelli-studio application.



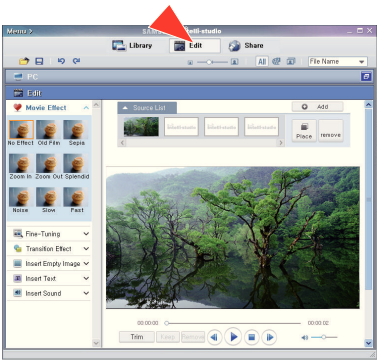
1. Run the Intelli-studio program. ➥page 102
2. Click the desired folder to display your recordings.
   - Video (or photo) thumbnails appear on the screen, according to the selected source.
3. Select the video (or photo) that you want to play, and then double-click to play back.
   - Playback starts and the playback controls appear.

The following is the file format supportable in Intelli-studio:
- Video formats: MP4 (Video: H.264, Audio: AAC), WMV (WMV 7/8/9)
- Photo formats: JPG, GIF, BMP, PNG, TIFF

Step 4. Editing videos (or photos)

With Intelli-studio, you can edit videos or photos in various ways. (Movie Effect, Fine-Tuning, Transition Effect, Insert Text etc.)

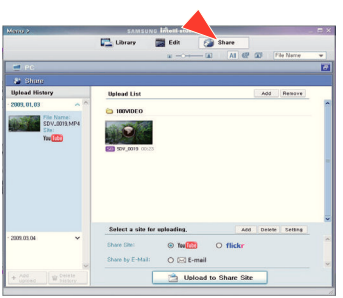
- To edit a file using the Intelli-studio, ensure to use a copy of the desired file saved in My Computer before clicking on the **“Edit”** icon.

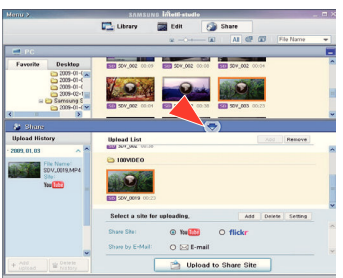


Step 5. Sharing the video/photos online

Share your contents with the world by uploading photos and videos directly to a web site with one click.

1. To do this, select **“Share”** in the main Video window.
2. Click **“Add”** and move the video or photo (drag and drop) to the sharing window for upload.
   - The selected file appears in the sharing window.
3. Click on the website you would like to upload files to.
   - You can choose “YouTube,” “Flickr,” or the specified website you want to set for your uploading management.
4. Click **“Upload to Share Site”** to start uploading.
   - A pop-up window appears asking for your ID and the password.
5. Enter your ID and password to access.
   - Access to the web site contents can be limited depending on your web access environment.

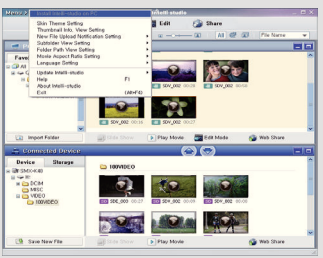


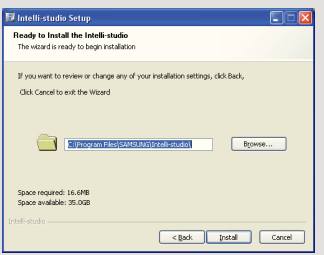


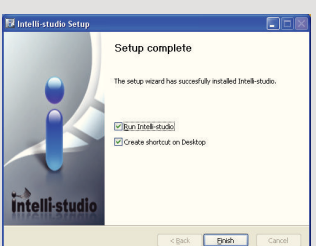
For more information about the Intelli-studio use, see the Help Guide by clicking the **“Menu” → “Help.”**

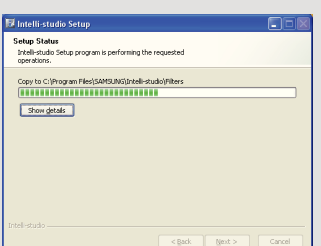
Installing Intelli-studio application on a Windows computer

- When the Intelli-studio application is installed on a Windows computer, it will run faster after connecting the camcorder to your computer. Moreover, the application can be updated automatically and run directly on the Windows computer.
- The Intelli-studio application can be installed on a Windows computer as follows:
  Click on **"Menu"** → **"Install Intelli-studio on PC."** in the Intelli-studio screen.









using with a Windows computer

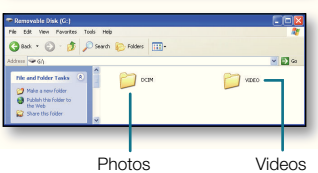
TRANSFERRING VIDEOS/PHOTOS FROM THE CAMCORDER TO YOUR COMPUTER

You can transfer or copy recorded data to a Windows computer by connecting the USB cable to the camcorder.

Step 1. Viewing the contents of storage media (built-in memory or memory card)

1. Check the **"PC Software: Off"** setting. ➥page 93
2. Check the storage media.
   (If you have video or photos recorded on a memory card, insert a memory card.) (SMX-K44/K45 only)
3. Connect the camcorder to the PC with the USB cable. ➥page 100
   - The "Removable Disk" or "Samsung" window appears on the PC's screen after a moment.
   - The removable disk appears when connecting a USB.
   - Select "Open folders to view files using Windows Explorer" and click "OK."
4. The folders in the storage media appear.
   - Different file types are stored in different folders.

Removable Disk (G:)
Windows can perform the same action each time you insert a disk or connect a device with this kind of file:
Pictures
What do you want Windows to do?
using Photo Printing Wizard
View a slideshow of the images
using Windows Picture and Fax Viewer
Copy pictures to a folder on my computer
using Microsoft Scanner and Camera Wizard
Browse picture files
using MediaShow
Open folder to view files
using Windows Explorer
Always do the selected action.
OK
Cancel



- If the "Removable Disk" window does not appear, confirm the connection (➥page 100) or repeat steps 1 and 3 again.
- When the removable disk does not appear automatically, open the removable disk folder of My Computer.
- If the connected camcorder's disk drive does not open or the context menu that appears when right-clicking your mouse (open or browse) appears broken, your computer may be infected by an Autorun virus. Be sure to update your antivirus software to the latest version.

Structure of folders and files on the storage media

- The folder and file structure for built-in memory or memory card is as follows.
- Don't arbitrarily change or remove the folder or file name. It may not be playable.

Videos (H.264) ①

- The SD-quality videos are named as "SDV_####.MP4" and Web videos are named as "WEB_####.MP4".
- The SD quality videos will be named as SDE_####.MP4 when you edit videos using the PC software.
- The file number automatically increases when a new video clip file is created.
- Up to 9,999 files can be created in one folder. A new folder is created when more than 9,999 files are created.

Photos ②

- As with video clip files, the file number automatically increases when a new image file is created.
- The maximum file number allowed is the same as in video clip files.
  A new folder stores files starting with SAM_0001.JPG.
- The folder name increases in the order of 100PHOTO → 101PHOTO etc.
- Up to 9,999 files can be created in one folder. A new folder is created when more than 9,999 files are created.

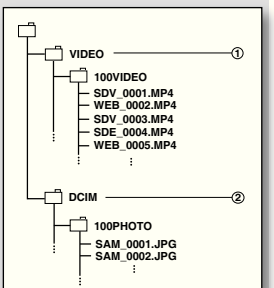


Image format

Videos

- Videos are compressed in H.264 format. The file extension is **".MP4."**
- Refer to page 55 for video resolution.

Photos

- Photos are compressed in JPEG (Joint Photographic Experts Group) format. The file extension is **".JPG."**
- Refer to page 55 for photo resolution.

- When the 9,999th file is created in the 999th folder (i.e. SDV_9999.MP4 is created in the 999 VIDEO folder), no more folders can be created. Backup your files to a PC and format the storage media, and then reset the file numbering from the menu.
- We don't recommend you modify the name of a file/folder stored in the storage media using a PC.
  If you modify it, this camcorder may not recognise the modified files.
- You can use your camcorder as a storage device.

MAINTENANCE

Your camcorder is a product of superior design and craftsmanship and should be treated with care.
The suggestions below will help you fulfil any warranty obligations and allow you to enjoy this product for many years.

✪ For safekeeping of the camcorder, be sure to turn it off.
- Remove the battery pack and AC power adaptor. ➥page 16
- Remove a memory card. ➥page 37

Cautions on Storing

- **Do not leave the camcorder in a place where the temperature is very high for a long period of time:**
  The temperature inside a closed vehicle or trunk can become very high in a hot season. If you leave the camcorder in such a place, it could malfunction or the case could be damaged. Do not expose the camcorder to direct sunlight or place it near a heater.
- **Do not store the camcorder in a place where the humidity or dust level is high:**
  Dust entering the camcorder could cause a malfunction. If humidity is high, the lens could become moldy, and the camcorder could become inoperative. It is recommended that you put the camcorder in a box together with a desiccant packet to help protect it from humidity when storing it in a closet, etc.
- **Do not store the camcorder in a place subject to strong magnetism or intense vibrations:**
  This could cause malfunctions.
- **Detach the battery pack from the camcorder and store it in a cool place:**
  Leaving the battery pack attached or storing it at high temperature could shorten its life.

Cleaning the camcorder

✪ Before cleaning, turn off the camcorder and remove the battery pack and AC power adaptor.

- **To clean the exterior**
  - Wipe gently with a soft dry cloth. Do not apply excessive force when cleaning, gently rub the surface.
  - Do not use benzene or thinner to clean the camcorder. The coating of exterior could peel off or the case could deteriorate.
- **To clean the LCD monitor**
  Wipe gently with a soft dry cloth. Be careful not to damage the monitor.

- **To clean the lens**
  Use an optional air blower to blow out dirt and other small objects. Do not wipe the lens with cloth or your fingers. If necessary, wipe gently with lens cleaning paper.
  - Mold may form if the lens is left dirty.
  - If the lens looks dimmer, turn off the camcorder and leave it for about 1 hour.

ADDITIONAL INFORMATION

Storage media

- **Be sure to follow the guidelines below to prevent corruption or damage of your recorded data.**
  - Do not bend or drop the storage media, or subject it to strong pressure, jolts or vibrations.
  - Do not splash the storage media with water.
  - Do not use, replace, or store the storage media in locations that are exposed to strong static electricity or electrical noise.
  - Do not turn off the camcorder power or remove the battery or AC power adaptor during recording, playback, or when otherwise accessing the storage media.
  - Do not bring the storage media near objects that have a strong magnetic field or that emit strong electromagnetic waves.
  - Do not store the storage media in locations with high temperature or high humidity.
  - Do not touch the metal parts.
- **Copy the recorded files to your PC. Samsung shall not be responsible for any lost data. (It is recommended that you copy the data from your PC to other media for storage.)**
- **A malfunction may cause the storage media to fail to operate properly. Samsung will not provide any compensation for any lost contents.**
- **Refer to pages 38-39 for details.**

LCD screen

- **To prevent damage to the LCD screen**
  - Do not push it too hard or knock it on anything.
  - Do not place the camcorder with LCD screen facing down.
- **To prolong service life, avoid rubbing it with a coarse cloth.**
- **Be aware of the following phenomena for LCD screen use. They are not malfunctions.**
  - While using the camcorder, the surface around the LCD screen may heat up.
  - If you leave power on for a long time, the surface around the LCD screen becomes hot.

Battery packs

The supplied battery pack is a lithium-ion battery. Before using the supplied battery pack or an optional battery pack, be sure to read the following cautions:

- **To avoid hazards**
  - Do not burn.
  - Do not short-circuit the terminals. When transporting, carry the battery in a plastic bag.
  - Do not modify or disassemble.
  - Do not expose the battery to temperatures exceeding 60°C (140°F), as this may cause the battery to overheat, explode or catch fire.
- **To prevent damage and prolong service life**
  - Do not subject to unnecessary shock.
  - Charge in an environment where temperatures are within the tolerances shown below.
    This is a chemical reaction - cooler temperatures impede chemical reaction, while warmer temperatures can prevent complete charging.
  - Store in a cool, dry place. Extended exposure to high temperatures will increase natural discharge and shorten service life.
  - Fully charge the battery pack at least every 6 months when storing the battery pack over a long period of time.
  - Remove from your camcorder when not in use, as these components may use current even when switched off.

- It is recommended that only genuine **Samsung** batteries be used in this camcorder.
  Using generic non-**Samsung** batteries can cause damage to the internal charging circuitry.
- It is normal for the battery pack to be warm after charging, or after use.
  Temperature range specifications
  - Charging: 50°F to 95°F (10°C to 35°C)
  - Operation: 32°F to 104°F (0°C to 40°C)
  - Storage: -4°F to 140°F (-20°C to 60°C)
- The lower the temperature, the longer recharging takes.

USING YOUR CAMCORDER ABROAD

- Each country or region has its own electric and color systems.
- Before using your camcorder abroad, check the following items.

Power sources

The provided AC adaptor enables you to use your camcorder in any country/region within the AC 100 V to 240 V, 50/60 Hz range. Use a commercially available AC plug adaptor, if necessary, depending on the design of the wall outlet.

On TV color systems

Your camcorder is an **NTSC-**system-based camcorder. If you want to view your recordings on a TV or to copy it to an external device, it must be an **NTSC-**system-based TV or an external device having the appropriate Audio/Video jacks. Otherwise, you may need to use a separate video format transcoder (NTSC-PAL format converter).

The format transcoder is not provided by SAMSUNG.

NTSC-compatible countries/regions
Bahamas, Canada, Central America, Japan, Korea, Mexico, Philippines, Taiwan, United States of America, etc.

PAL-compatible countries/regions
Australia, Austria, Belgium, Bulgaria, China, CIS, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Great Britain, Netherlands, Hong Kong, Hungary, India, Iran, Iraq, Kuwait, Libya, Malaysia, Mauritius, Norway, Romania, Saudi Arabia, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Syria, Thailand, Tunisia, etc.

You can make recordings with your camcorder and view pictures on the LCD screen from anywhere in the world.

TROUBLESHOOTING

✪ **Before contacting a Samsung authorized service center, perform the following simple checks. They may save you the time and expense of an unnecessary call.**

Warning indicators and messages

Power source

Message	Icon	Informs that...	Action
Low Battery	-	The battery pack is almost discharged.	• Change to a charged one or use the AC power adaptor. Charge the battery pack.

Storage media

Message	Icon	Informs that...	Action
Memory Full (SMX-K44/K45 only)		There is not enough space to record on the built-in memory.	• Delete unnecessary files on the built-in memory. Use a memory card. • Back-up files to your PC or another storage media and delete files.
Insert Card		There is no memory card inserted in the card slot.	• Insert a memory card.
Card Full		There is not enough space to record on a memory card.	• Delete unnecessary files on a memory card. Use the built-in memory. (SMX-K44/K45 only) • Back-up files to your PC or another storage media and delete files. • Change to another memory card which has enough free space.

Message	Icon	Informs that...	Action
Card Error		The memory card has some problem and cannot be recognized.	• Format the memory card or replace it with a new one.
Card Locked		The write protection tab on an memory card has been set to lock.	• Release the write protection tab.
Not Supported Card		The memory card is not supported in this camcorder.	• Change to a memory card that we recommended.
Please format		The memory card is not formatted.	• Format the memory card using the menu.
Not formatted. Format the Card? (Format the memory?)	-	The format of the file is not supported by this camcorder.	• The file format is not supported. Check the supported file. • Format the memory card using menu item.
Low speed card. Please record a lower resolution.	-	The memory card does not have enough speed to record.	• Record video at a lower resolution. • Change the memory card to a faster one. ➥page 38

Recording

Message	Icon	Informs that...	Action
Write Error	-	Some problems occured while writing data to storage media.	• Format storage media using menus after backing-up important files to your PC or another storage media.
Release the EASY Q	-	You cannot operate some functions manually when EASY Q is activated.	• Release EASY Q function.
Recovering Data…	-	The file was not created normally.	• Wait until data recovery is finished. • Never turn off the power and eject memory card during recording.

Playback

Message	Icon	Informs that...	Action
Read Error	-	Some problems occurred during reading data from storage media.	• Format storage media using menus after backing up important files to PC or another storage device.
The Number of video files is full. Cannot copy videos.	-	Folder and files have reached capacity and you can not record.	• Format the storage media using the menu after backing up important files to your PC or another storage device. Set **"File No."** to **"Reset."**
The Number of photo files is full. Cannot copy photos.	-	Folder and files have reached their capacity and you cannot take a picture.	• Format storage media using the menu item after backing up important files to your PC or another storage device. Set **"File No."** to **"Reset."**

CAUTION

When there is condensation, put the camcorder aside for a while before using

- What is condensation?
  Condensation occurs when a camcorder is moved to a place where the temperature differs significantly from the previous place. In other words, the water vapor in the air turns into dew because of the temperature difference, and it condensates like dew on the external or internal lenses of the camcorder and on the reflection lens. When this happens, you temporarily may not use the record or play functions of the camcorder. Also, it may cause a malfunction or damage to the camcorder when using the device with the power on while there is condensation.
- What can I do?
  Turn the power off and detach the battery pack, and leave it in a dry area for 1~2 hours before using it.
- When does condensation occur?
  When the device is relocated to a place with a higher temperature than the previous location, or when using it in a hot area suddenly.
  - When recording outdoors in cold weather during the winter and then using it in indoors.
  - When recording outdoors in hot weather after being indoors or inside a car where the air conditioner was running.

Note before sending your camcorder for repair.

- If these instructions do not solve your problem, contact your nearest Samsung authorised service center.
- Depending on the problem, the camcorder's built-in memory (SMX-K44/K45 only) may need to be initialized or replaced and the data will be deleted. Be sure to back up the data on the camcorder to other storage media before sending your camcorder in for repair. Samsung cannot guarantee any loss of your data.

✪ **If you encounter any problems using your camcorder, check the following before asking for a service repair. If these instructions do not solve your problem, contact the nearest Samsung authorized service center.**

Symptoms and solutions

Power

Symptom	Explanation/Solution
The camcorder does not turn on.	• The battery pack may not be installed on your camcorder. Insert a battery pack into the camcorder. • The inserted battery pack may be discharged. Charge the battery pack or replace it with a charged one. • If you use an AC power adaptor, make sure it is properly connected to the wall outlet. • Remove the battery pack or unplug the AC power adaptor, and reconnect the power supply to the camcorder before turning it on.
The power automatically turns off.	• Is **"Auto Power Off"** set to **"5 Min"**? If no button is pressed for about 5 minutes, the camcorder is automatically turned off (**"Auto Power Off"**). To disable this option, change the setting of **"Auto Power Off"** to **"Off."** ➥page 91 • The battery pack is almost discharged. Charge the battery pack or replace it with a charged one. • Use the AC power adaptor.
Power cannot be turned off.	• Remove the battery pack or unplug the AC power adaptor, and reconnect the power supply to the camcorder before turning it on.
The battery pack is quickly discharged.	• The temperature is too low. • The battery pack is not fully charged. Recharge the battery pack. • The battery pack reached the end of its lifespan and cannot be recharged. Use another battery pack.

Displays

Symptom	Explanation/Solution
The TV screen or LCD display has distorted images or has stripes at the top/ bottom or on the left/right.	• It can occur when recording or viewing a 16:9-ratio image on a 4:3-ratio TV, or vice versa. For more details, see the display specification.
Unknown image appears on the LCD screen.	• The camcorder is in Demo mode. If you do not want to see Demo images, change the setting of **"Demo"** to **"Off."** ➥page 94
Unknown indicator appears on the screen.	• A warning indicator or message appears on the screen. ➥pages 114~116
The after image remains on the LCD screen.	• This occurs if you disconnect the AC power adaptor or remove the battery pack before turning the power off.
The image on the LCD screen looks dark.	• Ambient light is too bright. Adjust the brightness and angle of the LCD. • Use the LCD Enhancer function.

Storage Media

Symptom	Explanation/Solution
Memory card functions are not operable.	• Insert a memory card into your camcorder properly. ➥page 37 • If you use a memory card formatted on a computer, format it again directly on your camcorder. ➥page 85
Image cannot be deleted.	• You cannot delete the images protected by another device. Release the protection of the image on the device. ➥page 73 • Release the lock on the write-protect tab of the memory card (SDHC memory card, etc.), if any. ➥page 38
You cannot format the memory card.	• Release the lock on the write-protect tab of the memory card (SDHC memory card, etc.), if any. ➥page 38 • Copy all important recorded files to your PC before formatting. Samsung shall not be responsible for any loss of data. (It is recommended that you copy the data to your PC or other storage media.)
The data file name is not indicated correctly.	• The file may be corrupted. • The file format is not supported by your camcorder. • Only the file name is displayed, if the directory structure does not comply with the international standard.
Does not charge or operate even if the battery pack is inserted.	• Check whether you're using a Samsung battery pack. A non-Samsung battery pack may not be recognized properly by the camcorder.

Recording

Symptom	Explanation/Solution
Pressing the **Recording start/ stop** button does not start recording.	• There is not enough free space to record on the the storage media. • Make sure the memory card is inserted and write-protect tab is set to unlock. • The internal temperature of your camcorder is unusually high. Turn off your camcorder and leave it for a while in a cool place. • Your camcorder is damp and moist inside (condensation). Turn off your camcorder and leave it for about 1 hour in a cool place.
The actual recording time is less than the estimated time.	• The estimated recording time may vary depending on contents and features used. • Recording a fast-moving subject increases the bit rate and consequently the amount of storage space required for the recording, which can lead to a shorter available recording time.
The recording stops automatically.	• There is no more free space for recording on the storage media. Back up important files on your PC and format the storage media or delete the unnecessary files. • If you frequently record or delete files, the performance of the built-in memory will deteriorate. In this case, reformat the built-in memory. • If you use a memory card with a low writing speed, the camcorder automatically stops recording the videos and the corresponding message appears on the LCD screen.
When recording a subject illuminated by bright light, vertical lines appear.	• The camcorder is unable to record these levels of brightness.

Recording

Symptom	Explanation/Solution
When the screen is exposed to direct sunlight during recording, the screen turns red or black for an instant.	• Do not leave the camcorder with the LCD screen exposed to direct sunlight.
During recording, the date/time does not display.	• **"Date/Time Display"** to on. ➥page 89
The beep sound is not heard.	• Set the **"Beep Sound"** to **"On."** • The beep sound is temporally off while recording videos. • When the Audio/Video cable jack is connected to the camcorder, the beep sound will automatically turn off.
There is a time difference between the point where you press the **Recording start/stop** button and the point where the recorded video starts/stops.	• On your camcorder, there may be a slight time delay between the point when you press **Recording start/stop** button and the actual point where the recorded video starts/stops. This is not an error.
The recording stops.	• The internal temperature of your camcorder is unusually high. Turn off your camcorder and leave it for a while in a cool place. • Your camcorder is damp and moist inside (condensation). Turn off your camcorder and leave it for about 1 hour in a cool place.
You cannot record a photo image.	• Set your camcorder to Record mode. ➥page 23 • Release the lock on the write-protection tab of the memory card if set. • The storage media is full. Use a new memory card or format the storage media. ➥page 85 Or remove unnecessary images. ➥page 72

Adjusting the image during recording

Symptom	Explanation/Solution
Focus does not adjust automatically.	• Set **"Focus"** to **"Auto."** ➥page 61 • The recording conditions are not suitable for auto focus. Adjust the focus manually. ➥page 61 • The lens is dusty on the surface. Clear the lens and check the focus. • Recording is being made in a dark place. Increase the brightness in the place.
The image appears too bright or flickering, or changes in color.	• This occurs when recording images under a fluorescent lamp, sodium lamp, or mercury lamp. Cancel **"iSCENE"** to minimise these phenomena. ➥page 54

Playback on your camcorder

Symptom	Explanation/Solution
Pressing the playback (Play/Pause) button did not start playing.	• Press the **MODE** button to set Video Play mode. • Image files recorded on another camcorder may not play on your camcorder. • Check out a memory card compatibility. ➥page 38
The Skip or Search function does not work properly.	• If the temperature inside the camcorder is too high, it cannot function properly. Turn the camcorder off, wait for a few moments, and turn it on again.
Playback is interrupted unexpectedly.	• Check if the AC adaptor or battery pack is properly connected and stable.
You cannot hear sound when playing a Time Lapse recording.	• The Time Lapse REC function does not support sound. ➥page 66
Photos stored on a storage media are not displayed in the actual size.	• Photos recorded on other devices may not appear at actual size. This is not an error.

Playback on other devices (TV, etc.)

Symptom	Explanation/Solution
You cannot view the image or hear the sound on the connected device.	• Connect the audio line of the Audio/Video cable jack to your camcorder and the connected device (TV, DVD recorder, etc). (Red color- right, White color- left) • The Audio/Video cable jack is not connected properly. Make sure that the Audio/Video cable jack is connected to the proper jack. ➥page 95

Connecting to a computer

Symptom	Explanation/Solution
When using the videos, a computer does not recognize your camcorder.	• Disconnect the USB cable from the computer and camcorder, restart the computer, then reconnect it correctly.
Cannot play a video file properly on a PC.	• A video codec is needed to play the file recorded on your camcorder. Install or run the built-in edit software (Intelli-studio). • Make sure you insert the connector in the correct direction, and connect the USB cable to the USB jack on your camcorder firmly. • Disconnect the cable from the computer and camcorder, restart the computer. Reconnect it properly. • Your computer may not have the necessary performance specifications to play-back a video file. Check the recommended computer specifications.
Intelli-studio does not function properly.	• Exit the Intelli-studio application, and restart the Windows computer. • Intelli-studio is not Macintosh compliant. • Set **"PC Software"** to **"On"** in the Settings menu. • According to your computer type, the Intelli-studio program may not run automatically. In this case, open the desired CD-ROM drive that has the Intelli-studio program in My Computer and run iStudio.exe.
The image or sound on your camcorder is not played on your computer properly.	• Video playback or sound may stop temporarily depending on your computer. The video or sound copied to your computer is not affected. • If your camcorder is connected to a computer that does not support Hi-speed USB (USB2.0), the images or sound may not be played back correctly. The images and sound copied to your computer are not affected.
The playback screen is paused or distorted.	• Check the system requirements to play a video. ➥page 101 • Exit all other applications running on the current computer. • If a recorded video is played on your camcorder when it is connected to a computer, the image may not play smoothly, depending on the transfer speed. Please copy the file to your PC, and then play it back.

Connecting/Dubbing with other devices (TV, DVD recorder, etc.)

Symptom	Explanation/Solution
You cannot dub correctly using the Audio/Video cable.	• The Audio/Video cable is not connected properly. Make sure that the Audio/Video cable is connected to the proper jack, i.e. to the input jack of the device used for dubbing an image from your camcorder. ➥page 95

General operations

Symptom	Explanation/Solution
The date and time are incorrect.	• Has the camcorder been left unused for a long period of time? The backup built-in rechargeable battery may be discharged. ➥page 34
Pressing a button will not turn on or operate the computer.	• Remove the battery pack or unplug the AC power adaptor, and reconnect the power supply to the camcorder before turning it on.

Menu

<table>
<tr><th>Symptom</th><th>Explanation/Solution</th></tr>
<tr><td>Menu items are grayed out.</td><td>
• You cannot select grayed items in the current recording/playback mode.
• Most of the menu items cannot be selected when you set the EASY Q function.
• If there is no storage media inserted, it cannot be selected and will be dimmed on the menu : "Storage Type", "Storage Info", "Format", etc.
• There are some functions you cannot activate simultaneously. The following list shows examples of unworkable combinations of functions and menu items.
If you want to set the desired functions, do not set the following items first.
<table>
<tr><th><Cannot Use></th><th><Because of the following setting></th></tr>
<tr><td>"Back Light"</td><td>"C.Nite"</td></tr>
<tr><td>"C.Nite"</td><td>"iSCENE"</td></tr>
<tr><td>"Focus : Face Detection"</td><td>"C.Nite", "iSCENE", "Aperture : Manual", "Shutter Speed : Manual", "Digital Effect : Mirror, Mosaic, Step printing", "Video Resolution : Web Fine, Web Normal"</td></tr>
<tr><td>"Digital Effect : Mirror, Mosaic, Step printing"</td><td>"C.Nite", "16:9 Wide"</td></tr>
<tr><td>"Fader"</td><td>"Time Lapse REC"</td></tr>
<tr><td>"Shutter Speed : Manual"</td><td>"C.Nite", "Aperture : Manual"</td></tr>
<tr><td>"Aperture : Manual"</td><td>"C.Nite", "Shutter Speed : Manual"</td></tr>
<tr><td>"Zoom Type : Intelli-Zoom"</td><td>"16:9 Wide : Off", "Video Resolution : Web Normal, Web Fine"</td></tr>
<tr><td>"Zoom Type : Digital Zoom"</td><td>"C.Nite", "Digital Effect : Mirror, Mosaic, Step printing", "Video Resolution : Web Fine, Web Normal"</td></tr>
<tr><td>"16:9 Wide"</td><td>"Video Resolution : Web Fine, Web Normal"</td></tr>
</table>
</td></tr>
</table>

specifications

Model Name: SMX-K40BN/SMX-K40SN/SMX-K40LN/SMX-K44BN/SMX-K44SN/SMX-K44LN SMX-K45BN/SMX-K45SN/SMX-K45LN/SMX-K400BN/SMX-K400SN/SMX-K400LN

System	
Video signal	NTSC
Picture compression format	H.264/AVC Format
Audio compression format	AAC (Advanced Audio Coding)
Recording resolution	TV Super Fine (about 5.0Mbps), TV Fine (about 4.0Mbps), TV Normal (about 3.0Mbps), Web Fine (about 4.0Mbps), Web Normal (about 3.0Mbps)
Image device	CCD (Charge Coupled Device) (Max: 680K pixels)
Lens	F1.8 to 4.9, 52x (Optical), 65x (Intelli), 2200x (Digital) Electronic zoom lens
Focal Length	2.1mm~109.2mm
Filter diameter	Ø39
LCD screen	
Size/dot number	2.7 inches wide, 230k
LCD screen method	1.6" interlaced scan, LCD panel / TFT active matrix system
Connectors	
Composite video out	1.0V (p_p), 75Ω, analog
HDMI output	C-type
Audio output	-7.5dBm 47KΩ, analog, stereo
USB output	mini USB-B type (USB2.0 High Speed)
General	
Power source	5.0V (Using AC adaptor), 3.7V (Using Lithium Ion battery pack)
Power source type	Power supply (100V~240V) 50/60Hz, Lithium Ion battery pack
Power consumption	2.2W (LCD on)
Operating temperature	32℉~104℉ (0℃~40℃)
Operating humidity	10% ~80%
Storage temperature	-4℉ ~ 140℉ (-20℃ ~ 60℃)
Dimensions (W x H x D)	Approx. 2.32" x 2.55" x 4.84" (59mm x 65mm x 123mm)
Weight	Approx. 0.51lbs (235g) (without battery pack or memory card)
Internal MIC	Omni-directional stereo microphone

- These technical specifications and design may be changed without notice.

warranty

SAMSUNG
LIMITED WARRANTY

SAMSUNG Electronics America Inc. (SEA), warrants that this product is free from defective material and workmanship.
SEA further warrants that if product fails to operate properly within the specified warranty period and the failure is due to improper workmanship or defective material, SEA will repair or replace the product at it's option.
All warranty repairs must be performed by a SEA authorized service center. The name and address of the location nearest you can be obtained by calling toll free: 1-800 SAMSUNG (1-800-726-7864).
Labor
90 days carry-in
Parts
1 year

On carry-in models, transportation to and from the service center is the customer's responsibility.

The original dated sales receipt must be retained by the customer and is the only acceptable proof of purchase.
It must be presented to the authorized service center.

EXCLUSIONS (WHAT IS NOT COVERED)

This warranty does not cover damage due to accident, fire, flood and/or other acts of God; misuse, incorrect line voltage, improper installation, improper or unauthorized repairs, commercial use, or damage that occurs in shipping.
Exterior and interior finish, lamps, and glass are not covered under this warranty.
Customer adjustments which are explained in the instruction manual are not covered under the terms of this warranty.
This warranty will automatically be voided for any unit found with a missing or altered serial number. This warranty is valid only on products purchased in the United States and Puerto Rico.
Some States do not allow the exclusions or limitations of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.
This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.

If you have any questions or comments relating to
Samsung products, please contact the SAMSUNG
customer care center Samsung Electronics America, inc.

1-800-SAMSUNG (726-7864)

www.samsung.com/us

RoHS compliant

Our product complies with “The Restriction Of the use of certain Hazardous Substances in electrical and electronic equipment”, and we do not use the 6 hazardous materials- Cadmium(Cd), Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr +6), Poly Brominated Biphenyls (PBBs), Poly Brominated Diphenyl Ethers(PBDEs)- in our products.